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Philadelphia Evening Journal, May 12, 1857.

A LITERARY IMPOSTURE.

Interesting Correspondence.

On Thursday, the 12th of March last, after the close of the obsequies in honor of Dr. Kane, a number of his comrades dined together at Parkinson's. On that occasion the conversation turned upon the different published accounts of the Arctic expedition. Among these was one purporting to have been written by Auguste Sontag, which the party determined to denounce as being, in their opinion, a spurious work. This they did in the following

PROTEST.

We, the undersigned members of the Arctic Expedition, under the command of the late Dr. Elisha K. Kane, having noticed a book purporting to be written by one of our comrades, Auguste Sontag, astronomer to the Expedition, &c., take this opportunity to say that we believe it never to have been published with his consent or knowledge, he being at this time, and for some time before the book went to press, in Mexico. We are induced to make this public exposure because we believe the book injures our comrade to whom its authorship is attributed, and *it is no record of our labors.*

We therefore caution the public against its purchase, and respectfully request all editors favorable to the late expedition to copy this notice.

Henry Brooks,	William Morton,
Amos Bonsall,	J. J. Hayes,
H. Goodfellow,	Geo. Stephenson.

The proceedings of the meeting were reported in the Philadelphia Evening Journal, and having given offence to the publisher of Sontag's reputed book, he requested us to do him the justice to print the following card, to which we gave place in our columns the following day:—

To the Editor of the Phila. Evening Journal.

In your paper of Saturday, I noticed in an account of the proceedings at an entertainment given by Mr. G. W. Childs, of the firm of Childs and Peterson, to some of the members of the Grinnell Exploring Expedition in Search of Sir John Franklin, a protest signed by some of them, in relation to the publishing of Sonntag's Narrative of the Grinnell Expedition, which does much injustice to me as the publisher. If you will have the kindness to give the enclosed affidavit a place in your paper, you will oblige Yours, CHARLES C. RHODES.

Philadelphia, March 14, 1857.

Rosa Sonntag, being duly sworn, doth depose and say, that Mr. Charles C. Rhodes bought the narrative written by her husband, giving an ac-

count of his voyage to the Arctic regions, under the command of Dr. E. K. Kane, and that she believes he bought it for the purpose of publishing it.

ROSA SONNTAG.

Sworn and subscribed before me this 14th day of March, Anno Domini 1857. GEO. GEYER,
Alderman Thirteenth Ward.

Between these conflicting statements, the community, of course, found it difficult to decide, and we know that an effort was made at the time to misrepresent the relations of Messrs. Childs & Peterson, the publishers of Dr. Kane's narrative, to the controversy, and thereby to injure that firm in public estimation. Time, however, generally sets such matters right, and we now lay before our readers the following letters from Mr. Sontag and Mr. Goodfellow, the originals, and post-marked envelopes of which, we have seen.

The first letter we shall give, is from Henry Goodfellow, to G. W. Childs, Esq.:—

PHILADELPHIA, March 16, 1857.

My Dear Sir:—A card, signed by Charles C. Rhodes, the publisher of the alleged work of Mr. Sonntag, has been brought to my attention.

I desire to state to you how indignant I feel, and I believe all the rest of our party will feel, upon reading it, at this insolent perversion of an act of kind hospitality and attention to the members of our party, who, by your goodness, upon their return from the funeral of Dr. Kane, after an exposure all day without refreshment, were enabled to partake of the so necessary refreshment, while we were re-united once more around your table.

After dinner, the conversation turning upon our absent messmate, I believe it was myself who first alluded to the wretched work attributed to my absent comrade, Mr. Sonntag. One of our party (Dr. Hayes) proposed that we should notice the work, in order to save Mr. Sonntag harmless; but I suggested that it was too apparent a fabrication to rise to the dignity of contradiction. It was answered that thousands of the book had been sold, producing in the minds of inconsiderate and badly informed persons an impression disparaging of the expedition. The card, drawn up, has since received the signature of every member of our party who has seen it.

You disclaimed all interest in the matter, and the act was entirely that of the signers, who alone are responsible for it.

What was my amazement, a day or two afterwards, to read the card, and the affidavit of Mrs. Sonntag appended to it, setting forth that C. C. Rhodes had purchased "the narrative written by her husband giving an account of his voyage," &c., without stating of whom the purchase was made, or what narrative it was, showing, you perceive, no identity of the article purchased with the article published.

And for the best of reasons, as the narrative purchased, according to Rhodes' own confession to both you, sir, and myself, was intend-

ed for a mere magazine article for *Harper*, of some ten to fifteen pages, and its only similarity was in the main facts of the history of the expedition, which could have been obtained from the public papers of the date of our arrival.

The jumble of extracts from Arctic books, and the pictures, I have grounds for believing, amounting almost to certainty, no more emanated from Mr. Sonntag than they resemble the facts.

But C. C. Rhodes goes further, and promises to produce Mr. Sonntag's affidavit; the affidavit of a man who will not be able to recognize a single sentence in the book, and will be as much horror struck, to a moral certainty, as I would be if the title page bore my own name. The force of folly could no further go.

Very respectfully and truly yours,

HENRY GOODFELLOW.

G. W. CHILDS, Esq., Arch street.

The next letter is one from Mr. Sonntag, to G. W. Childs, as follows:—

HOTEL ITURBIDE,
Mexico, April 22, 1857.

Dear Sir:—A few days ago I received a letter from Philadelphia, informing me that a narrative of the last Arctic expedition was published under my name, and, almost at the same time, a friend, who returned from the United States, brought me the book itself. I am very much mortified to see my name at the head of such a wretched concern, especially as I never wrote anything about the expedition which could have given cause to a book like this.

To make the thing as absurd as possible, one of the copies which I saw is dedicated to Dr. Jayne, a man whose name I never heard before, and whose medicines I certainly never used; the other to Commodore Stockton, a gentleman whom I highly respect. It pains me very much to think he might possibly believe me to be the author who is impertinent enough to dedicate such a wretched publication to him.

I did not write the book, it is a shameful imposition, and I am determined to prosecute the rascally impostor who published it under my name.

I send to-day a note to the New York Herald, protesting against the authorship of this book, and you would oblige me very much if you could induce some of the Philadelphia and Washington papers to publish the same protest.

I want to bring a lawsuit against the publisher, and would receive it as a particular favor if you will inform me about the steps which I have to take in this matter. I am sorry that I cannot well leave here at present to come to Philadelphia, but I hope there are some means to punish a cowardly imposter who takes advantage of my absence to abuse my name for the sake of filling his pocket.

Waiting anxiously for a few lines from you,

I remain, truly yours,

AUGUSTE SONNTAG.

We ought to add that Mr. Childs has never corresponded with Mr. Sonntag on any subject whatever, and that he was surprised when he received from him the above letter.

DOCTOR HOOFLAND'S

CELEBRATED

GERMAN BITTERS.

PREPARED BY

Dr. C. M. JACKSON, Philada., Pa.

WILL EFFECTUALLY CURE

LIVER COMPLAINT, DYSPEPSIA, JAUNDICE,

Chronic or Nervous Debility, Diseases of the Kidneys, and all diseases arising from a disordered Liver or Stomach.

Such
as Constipation, Inward Piles,
Fulness or Blood to the
Head, Acidity of the Stomach,
Nausea, Heartburn, Disgust for Food,
Fulness or Weight in the Stomach, Sour Eructations, Sinking or Fluttering at the Pit of the
Stomach, Swimming of the Head, Hurried and
difficult Breathing, Fluttering at the Heart, Choaking
or suffocating sensations when in a lying posture, Dimness
of Vision, Dots of webs before the Sight, Fever and
Dull Pain in the Head, Deficiency of Perspiration, Yellowness of the Skin and
Eyes, Pain in the Side, Back, Chest,
Limbs, &c., Sudden Flushes of
Heat, Burning in the Flesh,
Constant Imaginings
of Evil, and great
Depression of
Spirits.

The proprietor in calling the attention of the public to this preparation, does so with a feeling of the utmost confidence in its virtues and adaptation to the diseases for which it is recommended.

It is no new and untried article, but one that has stood the test of a ten years' trial before the American people, and its reputation and sale is unrivalled by any similar preparations extant. The testimony in its favor given by the most prominent and well known Physicians and individuals in all parts of the country is immense, and a careful perusal of the Almanac, published annually by the proprietor, and to be had gratis of any of his Agents, cannot but satisfy the most skeptical that this remedy is really deserving the great celebrity it has obtained.

DERANGEMENTS OF THE LIVER AND STOMACH

Are sources of insanity. From disorder or obstruction, a morbid action of the sympathetic and other nerves follows, and the functions of the brain are impaired and deranged; derangement there will also produce diseases of the *heart, skin, lungs* and *kidneys*. It is owing to the same cause that thousands die with *Cholera, Bilious or Yellow Fever*, and that most baneful disease, *Consumption*.

The general want of success in treating diseases of the liver and stomach has not been a deficiency of pathological knowledge of their functions—but of a suitable compound that would act upon the disease and all the sympathetic affections. That has been gained in these Bitters: and they can be used by persons with the most delicate stomach with perfect safety—as they at no time debilitate the patient, but give strength and increase the nervous energy. They can be taken at all times, and under all circumstances. No ordinary exposure will prevent them having a salutary effect, and no bad effect can result from an over dose.

PERSONS ADVANCED IN LIFE,

And feeling the hand of Time weighing heavily upon them, with all its attendant ills, will find in the use of the Bitters, an Elixir that will instil new life into their veins; restore, in a measure, the energy and ardor of more youthful days; build up their shrunken forms, and give health and happiness to their remaining years.

It is a well established fact, that fully one-half of the female portion of our population, are seldom in the enjoyment of good health, or to use their own expression "never feel well." They are languid, devoid of all energy, extremely nervous, and have no appetite. To this class of invalids, these Bitters are *especially* recommended. Their peculiar tonic and invigorating properties render them invaluable in such cases.

Persons visiting districts harassed annually with FEVER AND AGUE, or ANY FEVER OF A BILIOUS NATURE, will find that by the timely use of one or two bottles, they will not in one instance take the disease, as the Bitters will renovate and strengthen the system, and carry the bile off in its natural channel. *Prevention is better than cure.*

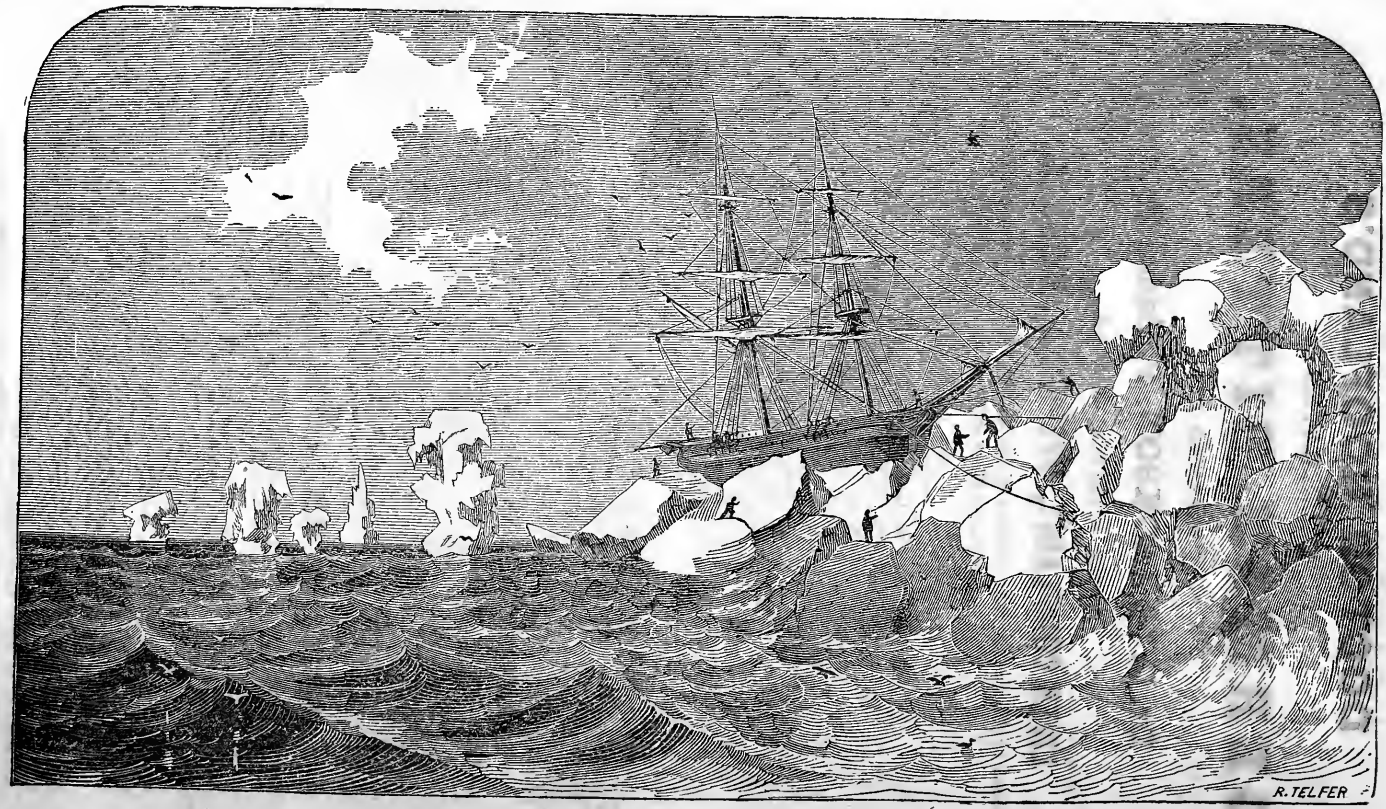
THEY ARE ENTIRELY VEGETABLE,

And free from Alcoholic Stimulant, and all injurious ingredients; are pleasant in taste and smell, mild in their operation, will expel all morbid secretions from the body, give bloom to the pallid cheek, and health and vigor to the frame.

Price 75 cents per bottle.

Principal Office No. 96 ARCH Street, Philadelphia, Pa.

Sold by Druggists and Storekeepers in every town and village in the United States and Canadas, South America and West Indies.



PREPARING TO LAUNCH FROM ICEBERG.

PROFESSOR SONNTAG'S

THRILLING NARRATIVE

OF THE

GRINNELL EXPLORING EXPEDITION

To the Arctic Ocean,

IN THE YEARS

1853, 1854, AND 1855,

IN SEARCH OF SIR JOHN FRANKLIN,

UNDER THE COMMAND OF

DR. E. K. KANE, U.S.N.

CONTAINING

THE HISTORY OF ALL PREVIOUS EXPLORATIONS OF THE ARCTIC OCEAN, FROM THE YEAR 1618 DOWN TO THE PRESENT TIME;

SHOWING HOW FAR THEY ADVANCED NORTHWARD, WHAT DISCOVERIES THEY MADE, AND THEIR SCIENTIFIC OBSERVATIONS. THE PRESENT WHEREABOUTS OF SIR JOHN FRANKLIN AND HIS PARTY, IF THEY ARE STILL ALIVE. A STATEMENT OF THE ONLY PRACTICABLE METHOD BY WHICH THE NORTH POLE MAY BE REACHED; THE REASONS WHY ALL EXPLORING EXPEDITIONS HAVE HITHERTO FAILED TO PENETRATE THE ICY BARRIERS OF THE POLAR REGIONS.

HIGHLY IMPORTANT ASTRONOMICAL OBSERVATIONS,

PROVING THAT THERE IS NO SUCH THING AS APPARENT TIME AT THE NORTH POLE; SUFFERINGS OF DR. KANE'S EXPLORING PARTY; HOW THEY WERE BURIED FOR TWO YEARS IN THE ICE, ENDURING A DEGREE OF COLD NEVER EXPERIENCED BY ANY HUMAN BEING BEFORE; THEIR MIRACULOUS ESCAPES AND UNPRECEDENTED HARDSHIPS; THEIR ABANDONMENT OF THE SHIP; AND PERILOUS JOURNEY OF FOUR HUNDRED MILES OVER THE ICE.

WITH NEARLY ONE HUNDRED SPLENDID ENGRAVINGS.

BY

PROFESSOR AUGUST SONNTAG,

ASTRONOMER TO THE EXPEDITION, FORMERLY OF THE ROYAL OBSERVATORY AT VIENNA, AND LATE OF THE U. S. NATIONAL OBSERVATORY, WASHINGTON CITY, D.C.

PHILADELPHIA, PENN.:

JAS. T. LLOYD & CO.

CINCINNATI, OHIO:

JAS. T. LLOYD & CO.

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MRS. ELLA LLOYD,

In the Office of the Clerk of the District Court of the United States, in and for the Eastern District of Pennsylvania.

STEREOTYPED BY GEORGE CHARLES.

PROFESSOR SONNTAG.

DEDICATION.

TO COMMODORE ROBERT F. STOCKTON, U. S. N.

DEAR SIR:—Aware of the deep interest you take in every enterprise which is calculated to exalt the reputation of the Naval Service of your country—an object to which your personal efforts have been long and successfully directed—I dedicate this Volume to you, confident that you will not disapprove of the association of your name with the narrative of an undertaking which was worthy of the chivalric and heroic character of the American Navy; and which was designed to serve the cause of science and humanity. While I avail myself of that additional claim to public consideration which this Narrative will acquire from the use of your name, I rejoice in the opportunity thus afforded me, to offer this tribute (however unnecessary and valueless it may be) to your private character and public services. When I express the hope that these services may meet with due appreciation from the country of your birth and my adoption, I feel that all has been said which can declare the good wishes of your obliged friend and obedient servant,

THE AUTHOR.

PREFACE.

If the publication of such a book as this required any explanation or apology, it would be sufficient to say that every item of information relating to Arctic discovery is eagerly desired by the public at this time, and it would be almost criminal for any man who possesses such information to withhold it from the world. The undersigned having purchased Professor Sonntag's Narrative of the Grinnel Expedition, some months since, have used their best judgment and abilities in preparing this thrilling narrative for the press, to make it as acceptable to the reading public as possible. The artistic embellishments and electrotyping are of the first order; and we feel assured that many highly interesting facts recorded in this work have never appeared in print before. We are equally confident that no man who ever visited the Polar climes could be better qualified by nature and education to give an accurate and satisfactory account of Arctic affairs, than the gifted and scientific gentleman whose narrative we now offer to the public. All preceding journals of Arctic travelers have been more or less vague and incomplete, being for the most part diaries of personal adventure rather than graphic descriptions of the localities, incidents, and peculiarities of those myste-

rious regions which surround the Pole, and their almost equally remarkable inhabitants. In this work, as we confidently believe, the reading public will have the most concise and complete description of the manners and habits of the Esquimaux tribes that has ever issued from the press.

Professor Sonntag is now engaged with a party of scientific gentlemen in making explorations in Central America and in Mexico; accounts of their observations in those countries, together with drawings, maps, &c., all of the highest importance to geographical and geological science, will appear in book form as soon as the work can be made ready.

Respecting the price of this Volume, we have concluded to put it at such a low figure, as will enable all classes to read it. The first edition has been ordered in *advance* of its publication, and we confidently believe that it is destined to have an *unprecedented circulation.*

JAS. T. LLOYD & CO.

Philadelphia, Jan. 1*st*, 1857.

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SONNTAG'S NARRATIVE

OF THE

GRINNELL EXPEDITION

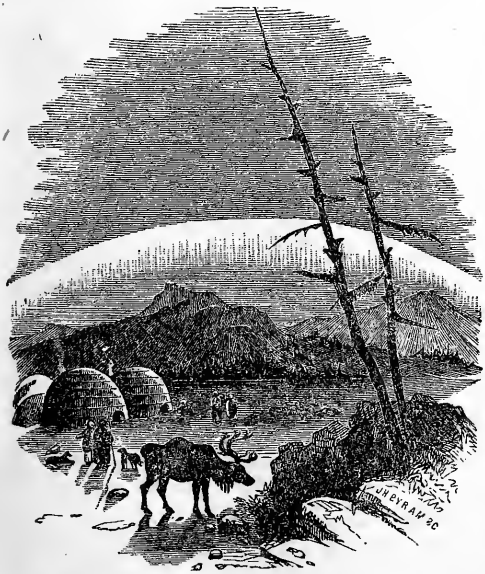
IN SEARCH OF

SIR JOHN FRANKLIN,

IN 1853-4-5.

CHAPTER I.

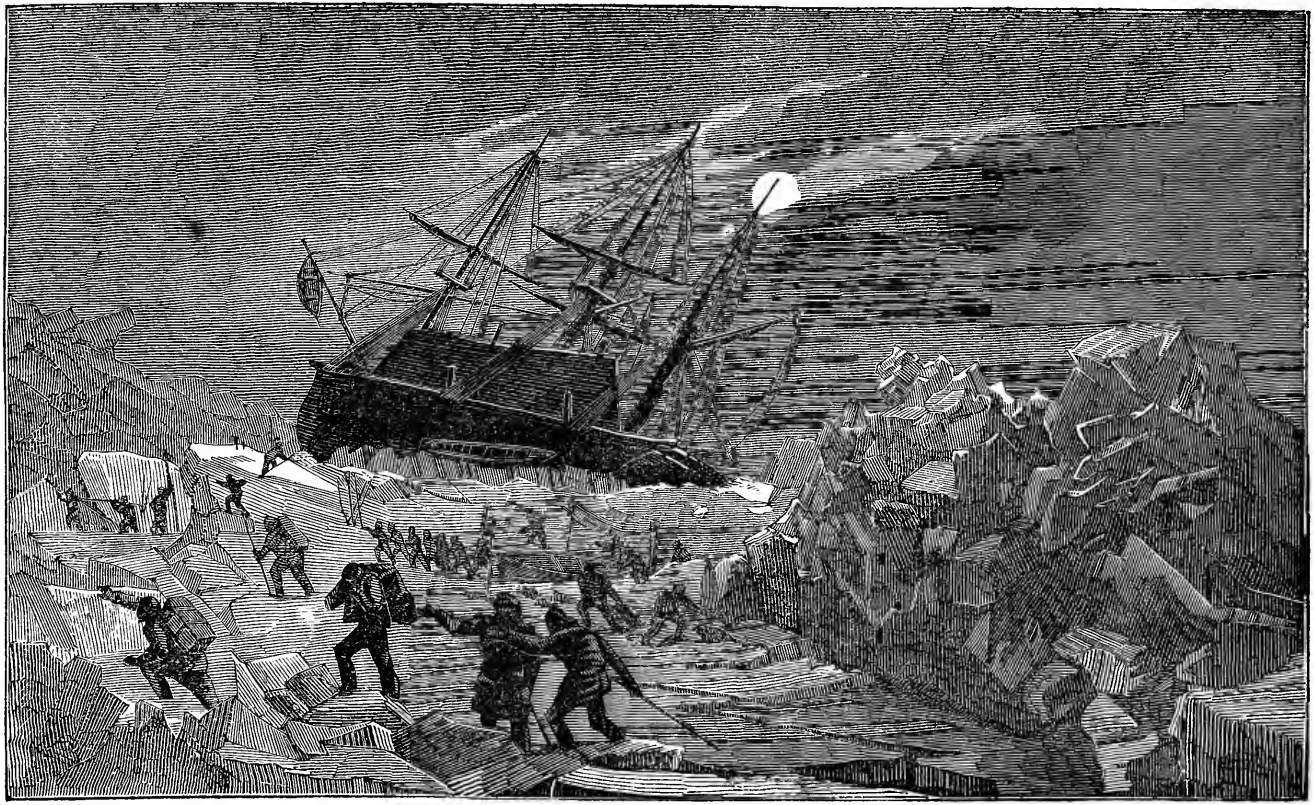
INTRODUCTORY OBSERVATIONS ON VOYAGES OF DISCOVERY AND EXPLORATION IN GENERAL.—THE UNFORTUNATE EXPEDITION OF SIR JOHN FRANKLIN. INEFFECTUAL ATTEMPTS TO DISCOVER HIS WHEREABOUTS AND TO AFFORD HIM RELIEF.



THE exploration of unknown regions has always been a favorite object with men of a bold and adventurous spirit,—and if we trace the history of the world, back to the remotest periods, even to the age of fable and poetic exaggeration, we shall find many memorable examples of those daring enterprises which aimed at the discovery of lands or seas the very existence of which was questioned by the generality of mankind. The renowned Argonautic expedition was probably an enterprise of this kind, though the real objects and events of that undertaking are hidden under the misty veil of

mythological narration. The Phœnicians were the most remarkable nation of antiquity for the extent of their maritime researches, and the number of their colonial settlements. But the enterprise of all early voyagers had its limits, as *coasting* was the only kind of navigation in which they could venture without encountering risks which were too formidable for human courage to undertake. The invention of the mariner's compass was the commencement of a new era in nautical affairs, as it enabled navigators to dispense with the land-marks which had hitherto guided them through the trackless deep, and to venture boldly through seas and oceans which had hitherto been deemed impassable. The splendid achievements of Columbus, Vespucius, and Vasco de Gama, were among the earliest results of this grand improvement in the art of navigation, an improvement which was soon followed by many others in marine architecture, and in the rigging and equipment of ships, the construction of which must necessarily be modified to suit the new service for which they were now required. The ships of earlier times were mere coasters, not at all adapted to the navigation of extensive seas or vast oceans, which now presented themselves as practicable fields for human enterprise.

After the discoveries in Oceanica, by Capt. Cook and others, the spirit of maritime adventure seemed, for a time, to come to a pause, or we may say, "for lack of argument." The opinion seemed to gain ground that very little more was left, in the way of exploration, for seafaring people to accomplish. Navigators were tempted to sit down and weep, like Alexander the Great, because the earth could afford them no other islands or continents to explore. Some attention, indeed, was directed to the Arctic regions; but the bounds of exploration in that quarter were believed to be well defined by an icy barrier, beyond which the enterprise of man could never penetrate. In the contemplation of this stupendous obstacle the most ardent enthusiasm became chilled and benumbed, and the proverbially reckless spirit of the sailor was appalled. There was a feeling of romantic and almost superstitious terror connected with the idea of sailing to a locality which appeared to be beyond the limits of the habitable globe; a locality the approaches to which were enclosed by portals of ice more repulsive than gates of adamantine rock; and which, if once passed, might be closed again on the too-daring traveller, shutting him forever from all intercourse with the cheerful world without, and confining him in the dreary dominions of perpetual winter, without any prospect of release. Imagination presented the frozen corpses of preceding adventurers lying "unknelled, uncoffined, and unknown," the victims of their own reckless



THE TERRIBLE NIGHT OF THE 15TH MARCH.

hardihood in having dared to venture beyond those limits where nature herself assumed an aspect of terrible menace, seeming to declare—"thus far shalt thou go, and no farther." To disregard this prohibition seemed to be almost an act of impiety, and many persons of sober judgment and scientific attainments thought that the experiment of Arctic exploration had been sufficiently tried, and that further attempts of the kind were utterly hopeless.

As early as the beginning of the sixteenth century efforts had been made by navigators, under the auspices of different European powers, to open a passage to China and the East Indies, by circumnavigating the northern coast of America. In the year 1527, the idea of a passage to the East Indies by approaching the North Pole, was suggested by a Bristol merchant to Henry VIII; but it appears that no voyage was undertaken for the purpose of navigating the circum-polar seas until the commencement of the following century. In 1607, an expedition, having this object in view, was fitted out at the expense of certain London merchants. To this attempt several others succeeded, at different periods; but although they were well projected, and were carried out with energy, and as much skill and science as the times could command, in every instance they proved total failures with regard to the main object of the enterprise.

At length, after the lapse of more than a century and a half, this interesting object obtained the royal patronage of Great Britain; and in 1773, an expedition under the command of Captain Phipps was planned and equipped by the British Government. Though Captain Phipps found it impossible to penetrate that vast rampart of ice, which extended for more than twenty degrees between the latitudes of 60° and 81°, "the belief of most scientific men of the age in the possibility of proceeding further, under more favorable circumstances, remained unshaken. In 1775–76, the Hon. D. Barrington, an English lord, published a book in which he discussed the possibility of approaching the North Pole, and notwithstanding many important and significant facts were contained in his valuable work, he was ridiculed by the most of his countrymen as an idle and visionary projector.

In 1806, a certain Captain Symmes, of Cincinnati, Ohio, produced a treatise on the Arctic regions, in which he suggested that the earth was probably hollow, and that a passage might be found somewhere beyond the Arctic circle, which would afford the means of entrance to the cavity within. He offered to verify his theory by actual experiment, to be made by himself, and expressed his willingness to stake his life and fortune on the result. This captain, in all other matters

conducted himself like a man of sound judgment, and his theory, singular and startling as it was, obtained considerable credit for a time, both in Europe and America. Even at this day, "Symmes' Hole" is not quite forgotten, though the captain's theory is believed by scientific men and the public in general to be quite as hollow as the earth itself, according to his representations. The Dutch made three several voyages, in 1594–5–6, for the discovery of a north-east passage, but were equally unsuccessful as the English.

All these efforts were made abortive by the icy obstructions, which are always encountered in those narrow seas which lie between and contiguous to Baffin's Bay and Behring's Straits. There is every reason to believe that this obstacle will always exist, causing the navigation of these waters to be attended with great peril and uncertainty, even in the most favorable seasons. This consideration goes far to preclude all hope that any object of much practical utility to the world can be accomplished by the navigation of these seas, even though the regions beyond could offer the strongest inducements to commercial enterprise. The passage recently discovered by the gallant exertions of Messrs. McClure and Inglefield, is not at all exempt from these difficulties, and the chief results of their discovery, made with so much labor and peril, are the solution of a geographical problem and a more precise knowledge of the localities.

During a period of forty years, the most strenuous and expensive exertions were made for the attainment of the grand object specified above. The English were the principal aspirants for the glory of that discovery, and the voyages of those celebrated British navigators, Ross, Perry and Franklin, contributed in a high degree to elucidate the geographical position of the northern American coast, and many additions were made by the exertions of these brave seamen to the stores of physical science.

So much has been said and written on the subject of a north-west passage from the Atlantic to the Pacific, and so many erroneous notions have been afloat concerning it, that I will account for the recent revival of the attempts to discover it.

Among the changes and vicissitudes to which the physical constitution of our globe is perpetually subject, one of the most extraordinary, and from which the most interesting and important results may be anticipated, appears to have taken place in the course of the last ten or fifteen years, and is still in progressive operation. The convulsion of an earthquake and the eruption of a volcano force themselves into notice by the dismay and devastation with which, in a greater or less degree,

they are almost always attended; but the event to which I allude has been so quietly accomplished, that it might have remained unknown, but for the extraordinary change which a few intelligent navigators remarked in the Arctic ice, and the reports of the unusual quantities of this ice observed in the Atlantic; this event to which I allude, was the disappearance of the whole or greater part of the vast barriers of ice, which for a long period of time, perhaps, was supposed to have maintained its firm, rooted position on the eastern coast of old Greenland; and its re-appearance in a more southerly latitude, where it was met with, as was attested by various persons worthy of credit, in the years 1815–16–17, by ships coming from the East Indies and America, by others going to Halifax and Newfoundland, and in different parts of the Atlantic, as far down as the fortieth parallel of latitude. Some of these detached masses were of an unusual magnitude and extent, amounting in some instances to whole islands of ice, of such vast dimensions that ships were impeded by them for many days, in their voyages; others were detached icebergs, from a hundred to a hundred and thirty feet above the surface of the water, and several miles in circumference. The Halifax Packet reported in 1845, that she had passed a mountain of ice nearly two hundred feet high, and at least two miles in circumference; a ship belonging to the old Greenland Missions was eleven days beset on the coast of Labrador in floes of ice mixed with icebergs, many of which had huge rocks upon them, gravel, soil, and pieces of wood. In short, every account from various parts of North America agreed in stating, that larger and more numerous fields and bergs of ice had been seen at greater distances from their usual places in the years above mentioned, than had at any time before been witnessed by the oldest navigators. The fact, therefore, might be considered as too well authenticated to admit of a doubt; it was at once concluded from whence the greater part of these immense quantities of ice were derived. In a letter from Mr. Scoresby, an intelligent navigator of the Greenland seas, to Sir Joseph Banks, he says: "I observed on my last voyage (1817) about two thousand square leagues (18,000 square miles) of the surface of the Greenland seas, included between the parallels of 74° and 80°, perfectly void of ice, all of which had disappeared within the last two years." And he farther states, "that, although on former voyages he had very rarely been able to penetrate the ice between the latitudes of 76° and 80°, so far to the west as the meridian of Greenwich, on his last voyage he twice reached the longitude of 10° west; that on the parallel of 74° he approached the coast of old Greenland; that there was little ice near

the land," and he added, that "there could be no doubt that he might have reached the shore, had he but a justifiable motive for navigating an unknown sea at so late a season of the year."

This account was fully confirmed by intelligence received at Copenhagen, from Iceland, in the year 1816, that the ice had broken loose from the opposite coast of Greenland, and floated away to the southward after surrounding the shores of Iceland, and filling all the bays and creeks of that island; and that this afflicting visitation was repeated in 1817; circumstances hitherto unknown to the oldest inhabitant. About the same time the whale ships that frequented the fishery in Davis' Straits, and the Hudson Bay traders, experienced an unusual number of icebergs, and large floes of ice drifting to the southward, down the straits, and along the coasts of Labrador, and of Newfoundland. Yet as to a certain extent those masses of ice were of frequent occurrence in these quarters, and occasionally met with in the Atlantic; it was those from the eastward that attracted particular notice. Whatever the cause may have been for the disruption of this immense barrier of ice from the eastern coast of Greenland, whether by its own weight, after centuries of accumulation, or from the partial disruption of the coast itself, the fact is unquestionable that the notoriety of it given in the several journals of Europe, and more especially in those of England, corroborated by various private communications, was among the circumstances which, combined with others, gave rise to the revival of those voyages of discovery for attempting a passage round the northern coast of America to the Pacific Ocean, and also to another attempt to reach the North Pole by proceeding between the east coast of Greenland, now freed from ice, and the west coast of Spitzbergen, generally not much hampered with ice. It may be observed that none of the old English navigators were able to penetrate any part of the Polar Sea, all their discoveries were confined to the straits, and inlets, and islands, on the eastern coast of America, and the large straits of Davis and Baffin, on the western coast of Greenland. Had Baffin entered Lancaster Sound from his own strait, he would at once have discovered the sea which communicates with the Pacific, and then there is no saying what this able old navigator and his contemporaries might not have effected; indeed, at the commencement of Parry's, Ross's, Franklin's, and Inglefield's voyages, from 1818 down to the voyage of Captain Back, in 1835, nothing was known of any entrance into the Polar Sea from the other side of America. All that was known on the first attempt, which hardly deserves the name, was that the Polar Sea did exist, that the ships of Captain Cook had looked in at it through

Behring's Straits, and that Fearne and Mackenzie, two North American travellers, had arrived at the northern shore of North America, at different points and at different times, and reported, somewhat doubtfully, that they had viewed the sea. From these circumstances, and more particularly from undoubted authorities it was quite clear that a current was constantly found setting down Davis' Strait, and the Strait of Hudson's Bay, and also along the shore of Spitzbergen, all to the southward; no doubt, therefore, could remain that there must be a water communication between the seas of the Pacific and the northern Atlantic, that the water supplied through the strait of Behring (a well-established fact) into the Polar Sea, was discharged by some opening or other yet to be discovered, into the Atlantic.

Many scientific men, however, turned into ridicule the idea of a polar basin, and others endeavored to show that if these currents existed, they must be very temporary or occasional, as they would otherwise drain this polar basin of its water.

It may be worth while, now, that the shores of this Polar Sea have been visited and surveyed, one part by English navigators, and the Asiatic part by the indefatigable Baron Wrangle, and others, to show to these would-be-wise gentlemen, what that sea really is, what are its inpourings, its outpourings, and its dimensions. In the first place, it is an immense basin of water, included by the shores of Asia, of Europe, and of America; of Asia from Nova Zembla, in 50° east longitude to East Cape in Behring's Strait in 170° west longitude; that is, 140° extent of coast; in Europe from Nova Zembla in 50° east longitude to Baffin's bay about 70° west longitude, an extent of coast equal to 120°; and in America from the last point 70° west longitude to Cape Prince of Wales, 168° west longitude in Behring's Strait, an extent of coast equal to 100°. These including the opening of Behring's Strait and that between Greenland and Spitzbergen, comprise the whole circle of 360°, an extent of coast which no other detached sea in the *world* can boast of. It is a circle of two thousand four hundred geographical miles in diameter, and seven thousand two hundred in circumference. Considering the latitude of 70° to be the average boundary line, which it nearly is, by taking the inlets of the land, to balance the outlets of the sea, and in order to satisfy the malcontents, regarding the currents exhausting its waters, it may perhaps be sufficient to state what are its supplies; they consist of the constant influx of a stream through Behring's Straits, of five or six great rivers from Asia: the Obi, the Jenisci, the Sena, the Indigiska, and the Kolima; Europe supplies the waters of Dwina with numerous streams from the coasts of Norway

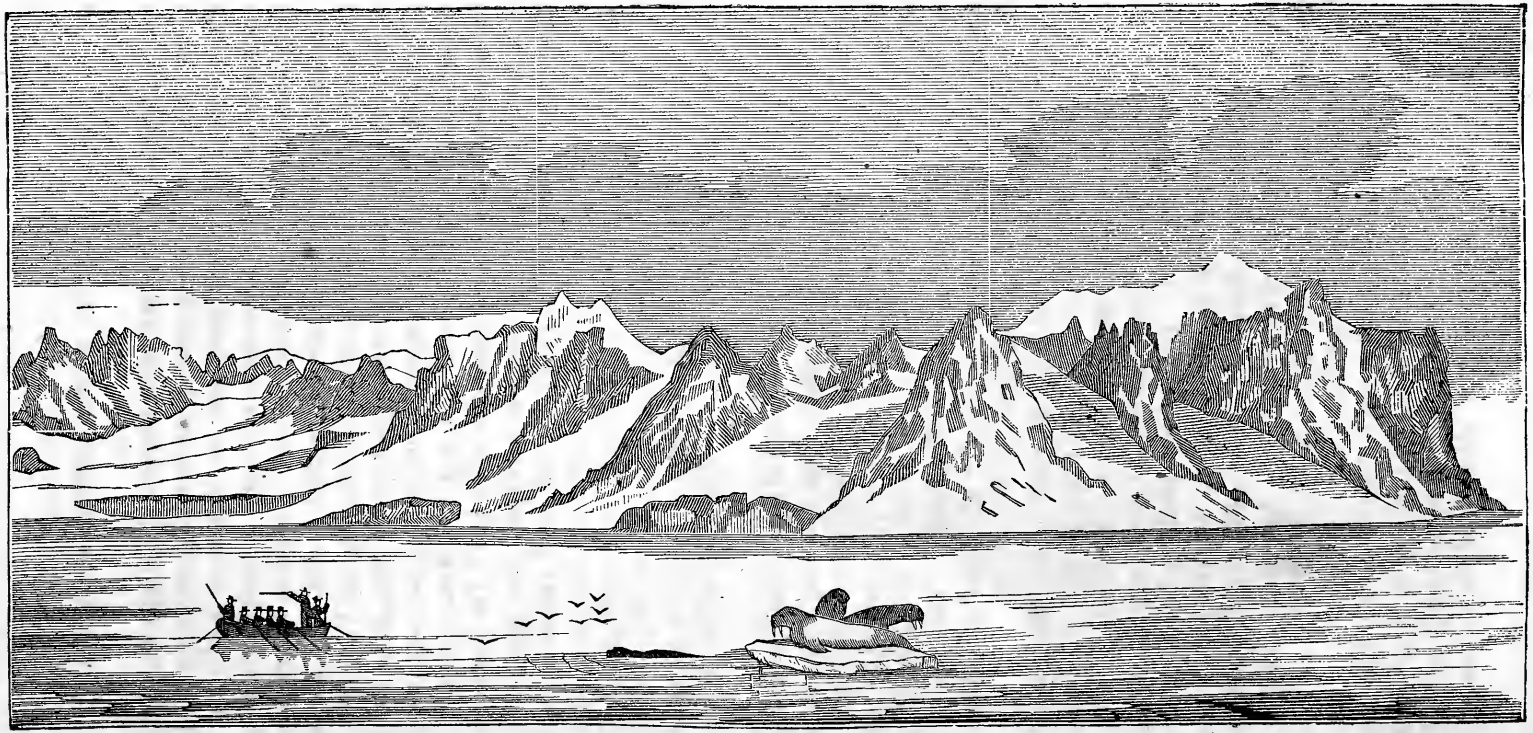
and Lapland, and the eastern coast of Greenland and the western coast of Baffin's Bay; and America pours in several copious streams from the Rocky Mountains with the Mackenzie, the Hearne or the Copper Mine, the Bock, and several other minor streams. To talk, therefore, of its being exhausted by the southerly currents, is absolute nonsense.

The main object of the English expedition in 1827 was, to discover an entrance from the eastern side of America into the Polar Sea. But it was not done by the first as it ought to have been done, and as the second (1835) most readily accomplished it, and, moreover, navigated one half of that sea to the westward, why then it may be asked, have future attempts failed to navigate the other half? The answer is easy enough; they failed by deserting the direct path that gave them half the passage towards Behring's Strait, and tried various new ways in search of openings into the Polar Sea, and found but one other on the whole eastern coast of America, and that one not navigable; the old route of Captain Parry through Lancaster Sound and Barrows Strait, as far as to the last land on its southern shore, and thence in a direct line to Behring's Strait, was the route ordered to be pursued by Sir John Franklin, in his last and fatal voyage.

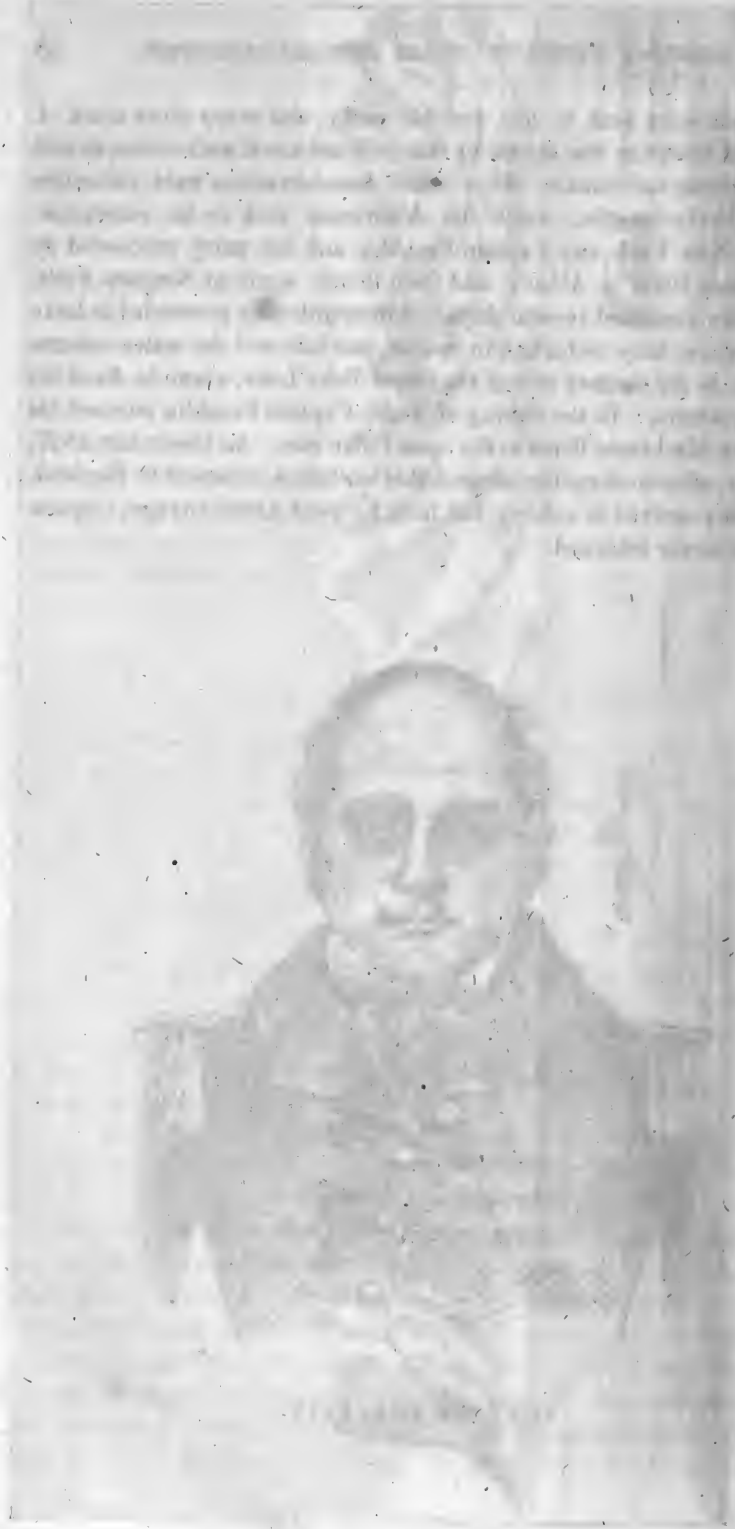
The unhappy fate of Franklin, which for a time was involved in profound mystery, did not deter others from following in his dangerous track. On the contrary, a feeling of enthusiasm was awakened in his behalf and that of his sorrowing and devoted consort, whose untiring exertions to save him from protracted suffering, or a horrible death, excited the sympathy of all Europe and America. This feeling stimulated nautical adventurers to that activity which has characterized the recent explorations of the Polar seas.

Captain Sir John Franklin, K. C. B., made several daring expeditions to the Polar Sea, but his endeavors to make further discoveries were only partially successful. His sufferings and hair-breadth escapes would have daunted almost any other man and deterred him from making other attempts of the same kind. But in 1825–26–27 we find Franklin again on a perilous journey to the polar climes. On this occasion he proceeded over land to the mouth of Mackenzie River, and from thence, by water, to the northwestern extremity of the American continent. The particular object of this expedition was the exploration of the coast between Mackenzie and Copper Mine rivers.

In this undertaking, Franklin started from Liverpool, February 6th, 1825, and arrived at New York on the 15th day of March following. His reception in the last-named city was extremely cordial and flattering. Invitations to attend the meetings of the various scientific



GLACIERS.—SPITZBERGEN.



institutions were sent to him and his party, and every other mark of respectful attention was shown by the civil and naval authorities, as well as by private individuals; all of which demonstrations were indicative of the lively interest, which the Americans took in his enterprise.

From New York city Captain Franklin and his party proceeded up the Hudson River to Albany, and from thence again to Niagara Falls, where they remained several days. Afterwards they proceeded to Lake Huron, where they embarked in canoes, and followed the water communications to the western side of the Great Bear Lake, where he fixed his winter quarters. In the Spring of 1826, Captain Franklin pursued his way down Mackenzie River to the open Polar Sea. In December, 1827, the party, after undergoing unspeakable hardships, returned to England, where they arrived in safety; but from his next Arctic voyage, Captain Franklin never returned.

SIR JOHN FRANKLIN.

in 1836–7, Captain Back of the English Navy, was sent on a voyage of discovery to the Arctic shores. He commanded the ship Terror, which had been chosen for this purpose. He made several important discoveries and having accomplished his perilous voyage to the satisfaction of the government which employed him, he returned in safety to his native country.

In 1845, Sir John Franklin, notwithstanding his painful experience in Arctic navigation, incredible sufferings, and miraculous escapes from death, was induced once more to take command of a polar expedition. His subsequent adventures are not matters of history but of conjecture only; and, until very lately, the world was in doubt whether he had ceased to exist or was still enduring a living death in some icy prison of the far North. In his final expedition, Franklin commanded the ships Terror and Erebus, the crews of both vessels amounting to one hundred and thirty-eight men, officered and manned as follows:

EREBUS.	TERROR.
Sir John Franklin, Captain.	Richard Crozier, Captain.
Jas. Fitz James, Commander.	Edward Little, Lieutenant.
Graham Gore, Lieutenant.	Geo. H. Hodgson, "
J. D. LeVesconte, "	John Irving, "
Jas. Wm. Fairholme, "	F. Harnby, Mate.
Chas. F. DesVaux, Mate.	Robt. Thomas, "
Robt. O. Sargent, "	Thos. Blanky, Ice Master.
E. Couch, "	G. A. Maclean, 2d Ice Master.
H. F. Collins, Second Master.	Jno. S. Peddie, Surgeon.
Stephen F. Stanley, Surgeon.	Alex. McDonald, Assistant.
H. D. Goodsir, Assist. "	J. H. Helpman, Clerk in Charge.
Jas. Reed, Ice Master.	11 Warrant and Petty Officers.
12 Warrant and Petty Officers	57 Seamen and Marines.
58 Seamen and Marines.	68 Total.

Captain Franklin was required, by his instructions, in the first place, to attempt a passage by Lancaster Sound, and any channel leading therefrom in the desired direction. The only intelligence of the Expedition ever received was in the first summer after its departure. When the want of further accounts from the exploring party began to produce a feeling of anxiety in England, a search was commenced by expeditions following on Franklin's supposed route, and others, entering

Behring's Straits with the hope of meeting him. Land-journeys were also undertaken for the same object. Most of these enterprises were planned and set on foot by Lady Franklin, the exemplary wife of the

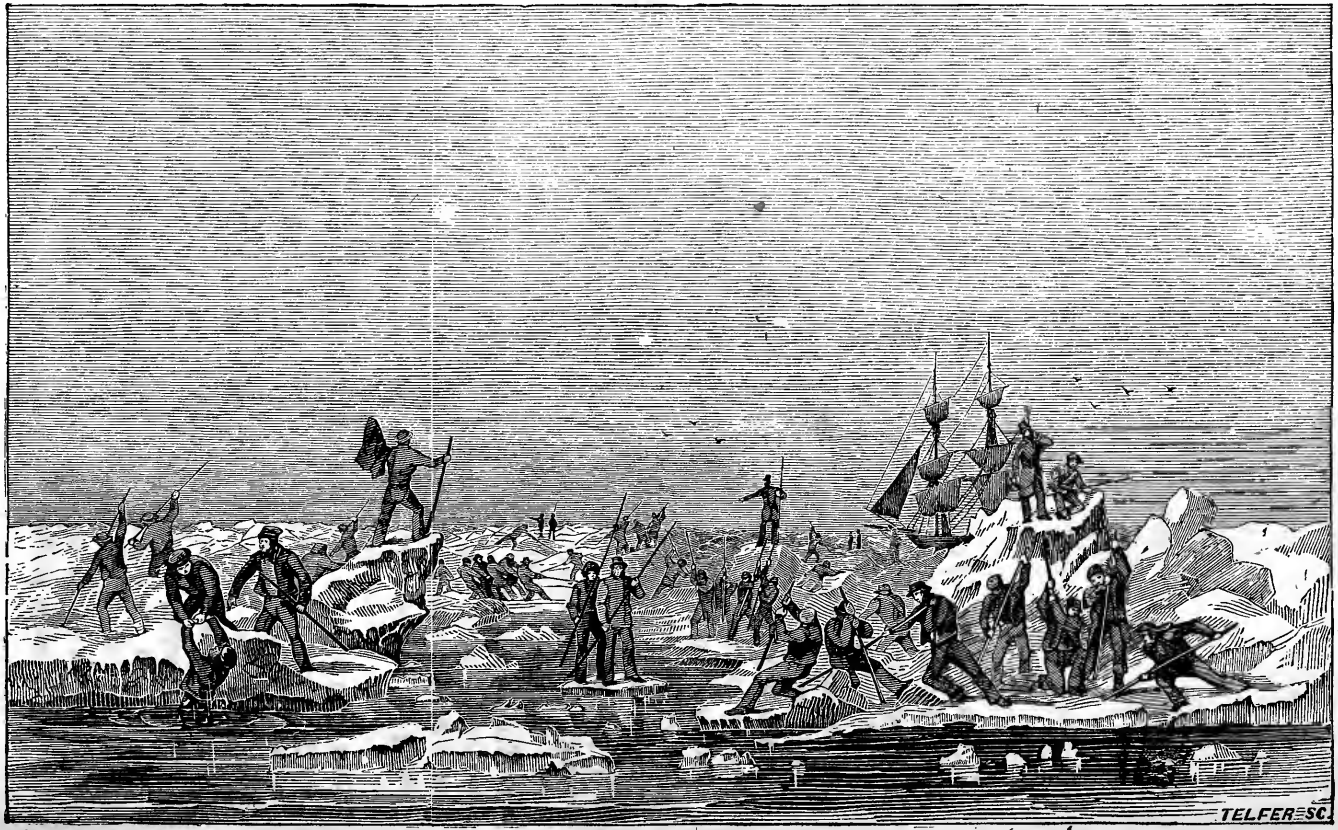
LADY FRANKLIN.

missing traveller. At the solicitation of this meritorious lady, the American Government accepted a generous offer made by Mr. Henry Grinnell, a merchant of New York, who proposed to furnish two brigantines for the purpose of fitting out an expedition for the relief of Captain Franklin. All the preparations having been completed, this first American expedition to the Arctic seas sailed from New York in May, 1850, under the command of Lieutenant E. J. DeHaven, of the United States Navy.

The American public need scarcely be reminded that this expedition, in company with that commanded by Captain Penny, discovered the first traces of Captain Franklin's party; these traces, however, were

very melancholy and unsatisfactory, consisting of three graves with tombstones, the remains of several rude huts, and a wooden pillar bearing an inscription, which unfortunately gave no information respecting the route which the party intended to take. These mementoes merely indicated that Franklin had established his winter-quarters on that spot. The place was Beechy Island, which had been previously discovered by Captain Parry. It was a subject of much regret that no record of Franklin's intended movements was found, as that would have furnished a clue for the subsequent search. These discoveries, therefore, only intensified the anxious desire to learn more of the mysterious fate of the distinguished commander.

The Senior Surgeon of Lieutenant De Haven's expedition, Dr. Kane, returned to the United States with a determination that something more should be done to restore Captain Franklin and his surviving followers to the world; hopes being still entertained that *some* of the party, at least, might have lived through the terrific dangers, hardships and privations which they must have encountered and endured. Dr. Kane had adopted the opinion which was commonly held in England by persons acquainted with the circumstances attending Arctic navigation, viz: that Sir John, after leaving Beechy Island, had penetrated through Wellington Channel in a northern direction. This opinion was founded on observations which were made on the state and position of the ice, as reported by those who had discovered the traces of Franklin's expedition. In pursuance of the plan of search which had been devised by Dr. Kane and other scientific men, assisted by the counsel of experienced navigators on both sides of the Atlantic, a second American expedition was determined on. It was to be conducted under the auspices of the United States Government, and was placed under the command of Dr. Kane, who had been detailed for that service by the Secretary of the Navy.



CUTTING OUT.

CHAPTER II.

CAPTAIN KANE'S EXPEDITION STARTS FROM NEW YORK—AFFECTING SCENES AT ITS DEPARTURE—ARRIVAL AT ST. JOHNS—THE TRIBULATIONS OF THE ADVENTURERS BEGIN EARLY—THE EXPEDITION REACHES GREENLAND—MODES OF LIVING OF THE ESQUIMAUX—VISIT TO THE DANISH SETTLEMENT—FREQUENT AND TERRIFIC APPEARANCE OF ICEBERGS—HOW THEY ARE FORMED, ETC.

The new expedition to which reference was made at the close of the last chapter, was the result of private enterprise, and was fitted out at the expense of several wealthy and munificent citizens of the United States. The American Government merely extended its patronage and protection to the glorious object, by providing such scientific instruments as the undertaking required, and designated some persons under naval appointments, viz:

THE BRIG "ADVANCE."

Dr. E. K. Kane, Commander.	Isaac J. Hays, M. D., Surgeon.
Henry Brooks, 1st Officer.	Amos Bonsall.
August Sonntag, Astronomer.	George Stephenson.
George Riley.	George. Whipple.
James McGarry.	Wm. Godfrey.
Henry Goodfellow.	John Blake.
John W. Wilson.	Jefferson Baker.
C. Ohlsen.	Peter Schubert.
Wm. Morton.	Thomas Hickey.

In several particulars, the plan of the new expedition differed from any which had been attempted before. It was assumed theoretically that there existed an open or navigable sea on the north of the 80th parallel of latitude. The term *open* sea was understood to designate one which was so far unembarrassed with ice as to be navigable in the summer season. It was proposed to reach this sea, (if such a sea could be found) by that route which was apparently the most direct, that is to say, via Smith's Sound; and to descend for the proposed search, to

the southern and western shores. The search was to be extended from the station of the ship by means of dog sledges, parties being sent out in various directions to establish depots of provisions in advance of the parties employed in the search.

We left New York on the last day of May, 1853, amidst the acclamations of thousands of spectators, who had assembled on the wharves to witness our departure. It was a radiant spring morning, the aspect of nature was cheerful and composed, but there was many a sad and agonized heart among the friends and relations of the voyagers, and the leave-taking was such as intimated that many fond parents, wives, brothers and sisters, feared that the parting would be forever. Many persons, at that time, regarded such a voyage as a desperate undertaking, and looked on the officers and crew of the Advance as persons self-doomed to certain destruction. They were, therefore, objects of general admiration and pity; the noble and benevolent cause for which they sacrificed themselves consecrated the rash and suicidal deed; and thus, according to the fancy of many spectators, the humblest sailor who walked the deck of that ship appeared to wear the crown of martyrdom.

But the expeditionists themselves were of a different temperament, otherwise they never would have offered themselves for such a service. The frowning genius of the icy ocean had no terror for them, but seemed to hold out wreaths of glory and renown for their acceptance. Accordingly they commenced their voyage with something like rapturous enthusiasm, which was scarcely checked by the loud and despairing lamentations of the dearest objects of their affection. In some cases the love of distinction appears to be the strongest passion of the human soul.

At the very outset, however, the crew of the Advance had a foretaste of the troubles which awaited them. The passage to St. Johns, in consequence of unfavorable weather and other causes, was unusually tedious. We stopped at this port two days, and obtained nine dogs of the kind which is used in Newfoundland, Labrador and other northern climates, for the purpose of drawing burdens on the snow. All the fresh meat which could be obtained at St. Johns was bought for the purpose of "marling," a preservative process which consists in rubbing the outside with salt and enclosing the pieces in hoods of canvas. The authorities of St. Johns showed all possible kindness and attention to the persons engaged in the expedition, and I rejoice in this opportunity to offer them my grateful acknowledgements for their generous hospitality, and the assistance they rendered us in making preparations for our subsequent travels.

From St. Johns we proceeded to the coast of Greenland, where we entered several Danish settlements, which extend at intervals between latitudes 60° and 73°. These are a kind of missionary establishments, intended in some measure for the instruction of the natives, but serving at the same time to carry on a profitable trade in furs and oil. These settlements are under the charge of a Danish officer, who is called "the merchant," and who exercises the somewhat complicated duties of storekeeper and governor. The storehouse under his superintendence is replenished at the annual visit of a ship sent from Denmark for this purpose. His *Excellency*, (if we may afford him that title,) buys from the Esquimaux the skins of seals and reindeer, and the blubber of whales, sea unicorns, &c., for which he gives them in exchange bread, coffee, butter, salt, and pork, which are almost the only articles of food these people obtain by commerce. The gubernatorial storekeeper supplies them, likewise, with coarse cloth, linens, and gaudy calicoes, for the fashionable Esquimaux ladies, who are desirous of improving on the seal-skin dresses of preceding generations. The storehouse is similar in appearance to one of the large country stores of the United States. The habitations of the Esquimaux themselves are small huts of wood or stone, the seams of which are stopped with clay and moss, and the roofs are commonly covered with painted canvas. The floors are of wood, and, taken altogether, these savage dwellings are superior to the abodes of the Irish peasantry, and to those of the corresponding classes in many countries which pretend to civilization. The Esquimaux hut, however, seldom has more than one apartment, and that single room often affords shelter and lodging for half a dozen married couples, with their numerous progeny. These small houses are extremely well lighted, one *cortlick*, or lamp, of blubber, being sufficient for that purpose. Some of the *conservative* Esquimaux, who are obstinately attached to the customs of their ancestors, warm their rooms with a kind of large blubber lamp, contrived for the purpose; but others who are more progressive use stoves, some of which are made of clay, after the Russian fashion. Those of the Greenlanders, who aspire to be of a more refined and superior order, are supplied with pots, pans, and other cooking utensils of cast iron, which are furnished to them by the mercantile Governor.

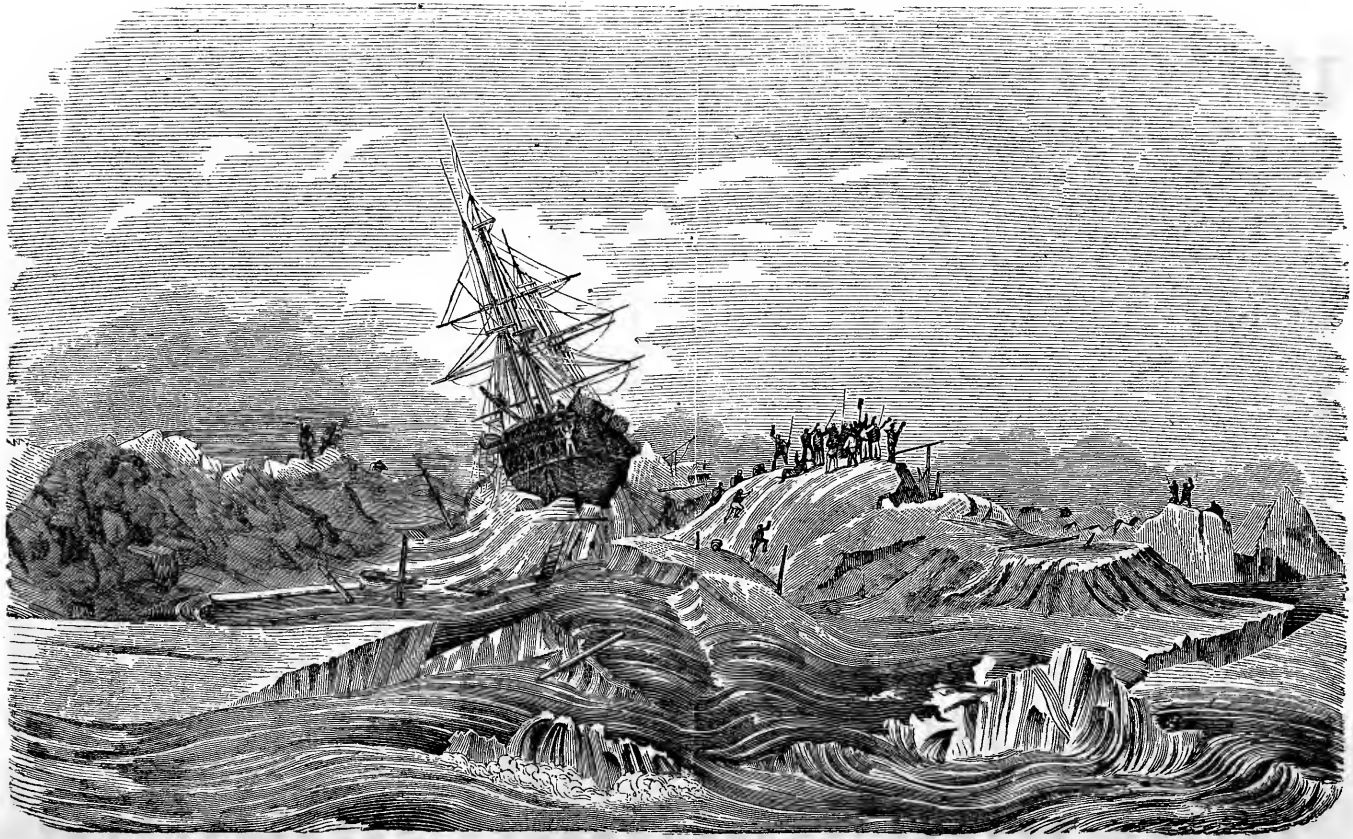
At Fiskenaes, where the expedition was received with great hospitality and enthusiasm, we obtained the services of an Esquimaux youth, aged about twenty years, who afterwards became very useful as a hunter and driver of the canine teams, to which duty he had been well accustomed. This settlement occupies a spot which is picturesquely

secluded behind some hilly islands, which partly obstruct the view of the village, without concealing it. These islands afford an excellent harbor. The settlement derives its Danish name from the abundance of codfish found in the adjacent waters. A large fleet of *Kyackers* surrounded the Advance on her arrival and escorted her into the harbor. The native ladies, themselves, resolved to take their part in this grand reception, for they came out to meet us in their *omeaks* or little vessels, made expressly for the use of their delicate sex, being constructed of transparent skins stretched over wooden frames. The Greenland naiads can manage these "fairy frigates" with surprising skill, and their nautical abilities so charmed the hearts of some of our sailors, that they were received on board with much cordiality, and banquetted on the fore-deck with the most sumptuous fare that Jack's aquatic larder could afford them.

Fiskenaes drives a considerable trade in eider down, seal skins, cod fish, and salmon. The Governor, Mr. Lassen, who resides at this spot, is an intelligent and polite gentleman, with a portly person and ruddy countenance. His large pipe was in such incessant use, that it appeared to be a part of himself. He looked the very picture of Scandinavian hospitality, and he gave us a welcome that deserves to be commemorated, spreading for us a board which groaned under all the oleaginous luxuries of the climate, and many imported ones, besides. The native delicacies of Mr. Lassen's table, the flesh of the seal, reindeer, &c., were improved by the arts of European cookery, so as to make them highly grateful to civilized palates, and especially so to sailors, whose privations on shipboard are apt to correct their gastronomic tastes, when they happen to be too epicurian in their tendency.

The next port we made was Suckertopper, which derives its name from a high peak in its vicinity, which is so called from its imagined resemblance to a sugar-loaf, with the white top protruding from its dark envelope. Suckertopper, in the Danish language, signifies "sugar-top." At this place we procured a quantity of seal-skins and other furs, also some additional saws, axes, and other tools, which we thought might be required in our further progress.

From Suckertopper we proceeded to Proven, where we had the good fortune to obtain several more teams of dogs, numbering about thirty of these useful quadrupeds. Mr. Karl Petersen, who had been engaged as interpreter to Penny's expedition, came on board at Upenavick, where the Advance stood off and on to communicate. Dr. Kane accepted the proffered services of Mr. Petersen, and he became one of the ship's company. His services were eminently useful to us afterwards.



PERILOUS SITUATION—ICE GIVING WAY.

Soon after we left Upenavick, (which is the most northern civilized station on the face of the globe), among other indications of a higher latitude, which presented themselves, was the increased number of icebergs. The appearance of these was now so frequent, that they ceased to be matters of curiosity, and we learned to look on these stupendous and dangerous objects with a degree of indifference. Imagine a mass of congealed water, far exceeding in its dimensions the largest Egyptian pyramid, looming up above the surface of the water, higher than the tallest steeple, threatening, every moment, to topple over and submerge every object in its neighborhood. Such floating mountains of ice are continually presenting themselves to the view of those who undertake to navigate Baffin's Bay. They often enclose huge pieces of rock, and masses of sand or earth, which they take up, in the manner we are about to describe.

The interior of Greenland may be considered as almost one entire mass of ice, as it is only on the mountains near the coast and on the smaller islands that the earth, with any of its vegetable productions, is visible. Immense processes of ice fill up the valleys and extend to the sea. The huge masses of ice resemble those of the Alpine glaciers, not such ice as that which is formed by the freezing of pure limpid water, but more like snow, which is congealed to a solid substance after being partially melted. It is opaque and granular, and has a slow motion, in those vast frozen valleys, towards the sea. According to Professor Forbes' theory, their motion is similar to that of a semifluid, and is produced by the gravitation of the whole body on a plane inclined towards the sea shore, the foremost masses being urged on by the pressure of those which are more remote from the sea coast and higher up in the valleys. According to the observations of Professor Forbes, and the reports of travellers among the Alps, the ice moves more slowly on both sides than in the centre of the glacier, where the velocity amounts sometimes to a foot *per diem*, and sometimes still more. On its edges, the glacier takes up and carries along rocks, sand, and other movable objects, which fall into the sluggish stream, or are washed down from the surrounding mountains.

When two such ice streams meet together and become united, the stones, sand, &c., which they hold in suspension, appear in the middle of the united streams. These ice-currents form continued lines, longitudinally and parallel to the sides of the valleys in which they have their origin. At the point where the glacier enters the sea, huge masses are formed, the pressure from behind heaping up the ice which has already entered the water, in vast piles. Thus the icebergs are

formed, and are driven by the winds and the currents out from the shore. In this way they are set afloat in the northern seas; sometimes to a great distance. Large bergs are often seen as far south as the Banks of Newfoundland.

The appearance of many icebergs is grand and magnificent beyond all power of description. Their size alone would make them objects of admiration; but in other respects they are calculated to overwhelm the spectator with awe and astonishment. Some of them appear like floating palaces, castles, or towers of stupendous dimensions, with spires, domes, or minarets, often formed with such regularity that the beholder is almost persuaded that they are works of art. Often when they reflect the beams of the sun, or the more lurid glare of the *aurora borealis*, they appear like immense structures of glass or crystal. The colors of icebergs are various; the majority of them are white or vitreous in appearance; but when seen on the shady side, or at a distance, or through mists or fogs, they wear a dark and frowning aspect, resembling mountains on the shore, or precipices of rock. Sometimes again, their colors are variegated, and I have occasionally seen some which had all the hues of the rainbow, and no imagination could picture a more splendid spectacle.

The motions or evolutions of icebergs are often no less awe-inspiring and wonderful. When some portions of them are melted away, and their form is thereby changed, so as to remove the centre of gravity, large masses often break off with a detonation like the explosion of an immense mine of gunpowder; the disrupted mass falling into the sea, produces a swell and agitation of the waters, which threaten to engulf ships sailing at a considerable distance from the dismembered iceberg. Sometimes the whole berg whirls over with the rapidity of lightning, and occasionally it makes several revolutions before it settles in a new position. These movements of icebergs constitute some of the most appalling dangers of Arctic navigation. It will easily be believed from what is here stated, that the approach of an iceberg is always regarded by mariners with feelings of intense anxiety, and much care is taken to give these marine prodigies what sailors call "a wide berth." The principal risk is that of running against them on a dark night.

CHAPTER III.

FURTHER OBSERVATIONS ON THE DIFFICULTIES OF ARCTIC NAVIGATION—"FLOES" AND "HUMMOCKS" OF ICE DESCRIBED—SHIPS BUILT EXPRESSLY FOR NAVIGATING THE POLAR SEAS—PREPARATIONS FOR PASSING THE WINTER AMONG THE ICE—WE BEGIN TO EXPERIENCE ALL THE HORRORS OF THE CLIMATE—GREAT MORTALITY AMONG THE DOGS.

In the summer season, pools of water are formed in pure marble-like basins, on the top of the icebergs, and cascades of clear and brilliant water often fall from them into the sea. Similar cascades and streams percolate through the glaciers. Owing to this cause, the surface of the glacier is very rough, being full of small chasms or indentations formed by the passage of the rivulets.

I have stated that icebergs are often objects of dismay to the navigators of those seas; but after the mariner has become accustomed to their appearance, much of his terror is dissipated. While the bergs are visible, they may generally be avoided with but little trouble; but in the dark season, or when the weather is foggy, the danger becomes more imminent. It is a fortunate circumstance that there is day-light during almost the whole of the navigable season on those waters.

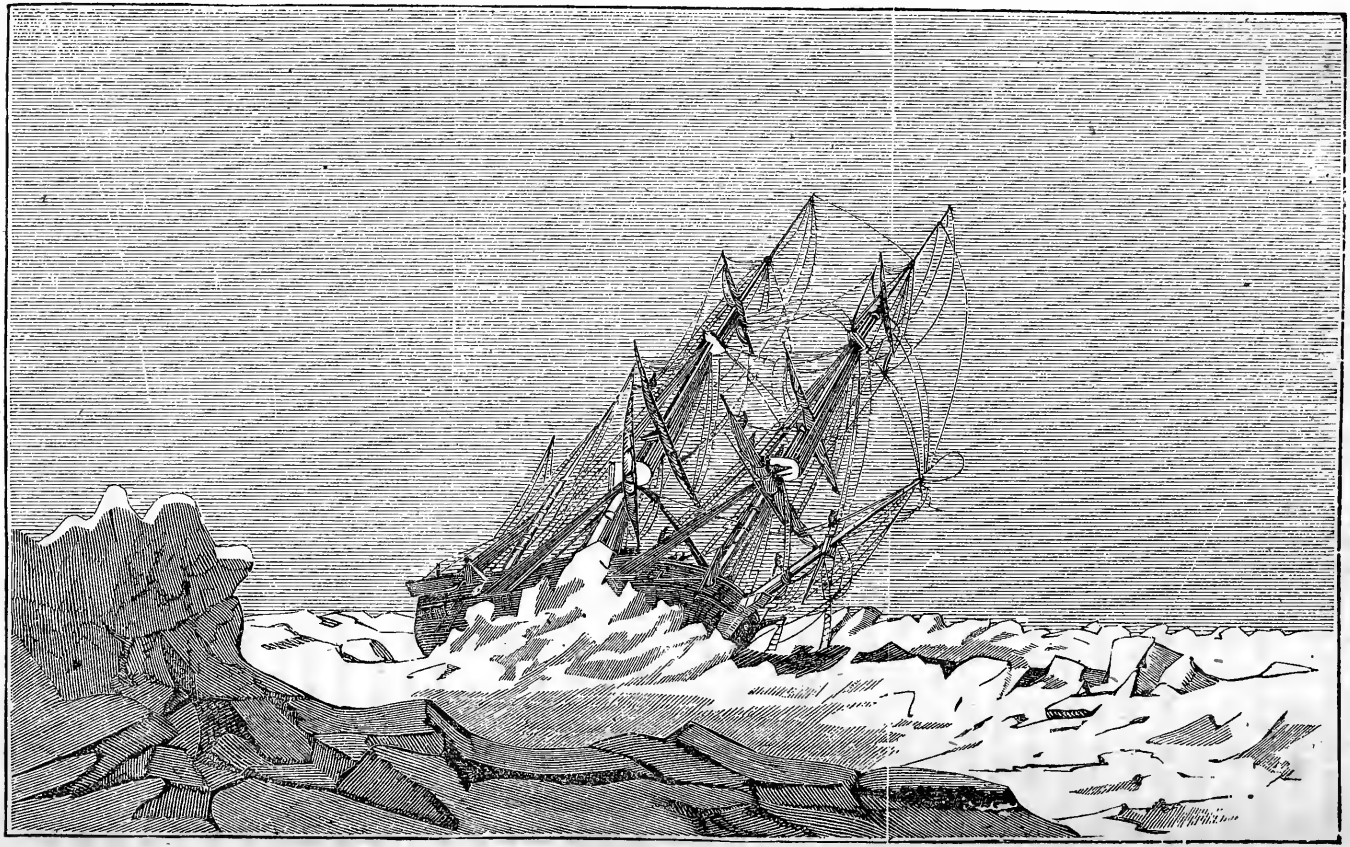
Still more formidable obstacles to navigation in those seas are the immense fields of floating ice which are formed in the sea itself. There are narrow passes or openings through these fields, called *leads*, in the technical language of the sailors, through which the navigator must penetrate, with the momentary risk of having his bark crushed between the sides of the icy chasm. These sides often collapse, or come together with a force more tremendous and irresistible than that of a tornado or earthquake. On such occasions, vessels built in the ordinary manner would be crushed like empty egg-shells. Some ships, however, are constructed expressly for this service, in the manner which I shall describe hereafter.

The whalers and other northern navigators, when they do not find a "bight" or indentation in one of the parallel fields of ice, or *floes*, (as

they are technically called,) endeavor to *saw* one; but, unless this is done before the motion commences, it is too late, and a fearful catastrophe is inevitable. In many cases, ships have been cut in two by the collapse of the fissure, so that the upper part of the hull was left on the surface of the ice, while the lower part went to the bottom. Sometimes the destruction of a vessel is instantaneous, not affording the crew sufficient time to escape, by precipitating themselves on the neighboring ice-fields. It is authentically stated that Captain Penny, the veteran Arctic sailor, on one of these perilous occasions, was obliged to run up the rigging to the cross-trees, and to leap from thence to a platform of ice, a feat which he was just able to accomplish as the mast, with all the rest of the ship, disappeared in the closing chasm.

These dangers have produced a necessity for constructing ships which are intended for Arctic voyages on a new and improved plan. The hull is formed with many additional beams and timbers, so as greatly to increase its solidity, and the sides are so shaped that, instead of being held fast by the collapse of the ice-crevice, the vessel is forced upward until it rises above the surface of the floe, and so escapes without damage. The pressure of two floes or platforms of ice against the sides of a vessel is called, in the language of the sailors, a "nip." By these nips, vessels of the improved pattern just described escape the crushing to which ordinary ships would be liable, but are lifted entirely out of the water.

Captain Kane's vessel, the Advance, received several quite noticeable "nips," without sustaining much damage thereby. She had been carefully prepared for the duty which she was appointed to perform, and proved that the ship-wrights of the United States could make their workmanship equal to any emergency. It is not only as a precaution against "nipping" that ships intended for Arctic service should be built in the most substantial manner that is possible. On other accounts it is highly necessary that they should be strong and well fortified. In order that any progression may be made, it is sometimes requisite, that they should be butted, under a full press of canvas, against "bight tongues," or ridges of ice, which join two heavy floes together, and are thus interposed, like a bar, across the passage, completely shutting it up. At other times, the ship must make headway against large pieces of floating ice, for the purpose of breaking them or thrusting them aside, in order to clear the track. Such pieces are often crowded together in water, which would otherwise be open. Obstructions of this kind yield, when a sufficient force is applied, and when it is necessary to overcome them, the ship is driven at full speed against lumps of



"NIPPED" BY THE ICE—FOX'S CHANNEL.

ice, which are almost as solid and obdurate as rocks. Any vessel built in the usual manner would, infallibly, be wrecked by such collisions.

In such circumstances as we have described, the Arctic steamer, under the command of Captain Hartstein, made extraordinary progress in her voyage through these seas. She was the very kind of vessel, which the purpose required; it was necessary to *bore* a passage, and she was equal to the task.

The Advance had a very fortunate and prosperous passage through Melville Bay, which name applies to that part of Baffin's Bay which forms a deep indentation, opening to the South-East, between 74 and 76° North latitude. This is the most perilous passage in the whole range of Arctic navigation. Here the ice accumulates, after emerging from the Sounds which open upon the Bay, and here it is detained, within a certain centre, by opposing currents. Melville Bay is a vast wilderness of ice, and it is only on extraordinary and fortunate occasions that a few "leads," or narrow passages of water, are open for the purposes of navigation. The surface is covered with fields of ice, varying in thickness from five to thirty feet, and extending in length for miles. Hummocks of ice and icebergs afford the only variety in the dreary prospects here presented to the observation of the mariner. These "hummocks" are commonly produced by the meeting of two large floes of ice, the edges of which break off, and are lifted up as the pressure goes on. These operations of nature are accompanied by a harsh grinding sound, additional fragments are broken off, and piled up, until a rough wall, of considerable altitude, is formed. Other hummocks originate with pieces of ice, of unusual size and thickness, which rise above the surrounding surface, and become stationary by freezing in contact with larger and less mobile masses. By this means the hummock becomes a hill of considerable elevation among the smooth and level ice which surrounds it.

Old floes are frequently found from twenty to thirty feet thick; and, occasionally, their thickness is three times as great. The age of these floes can be estimated when it is remembered that within the first year the freezing seldom exceeds nine feet in thickness, and is often not more than six feet, and the yearly accession afterwards is still less—a phenomenon which we will account for in another part of this work.

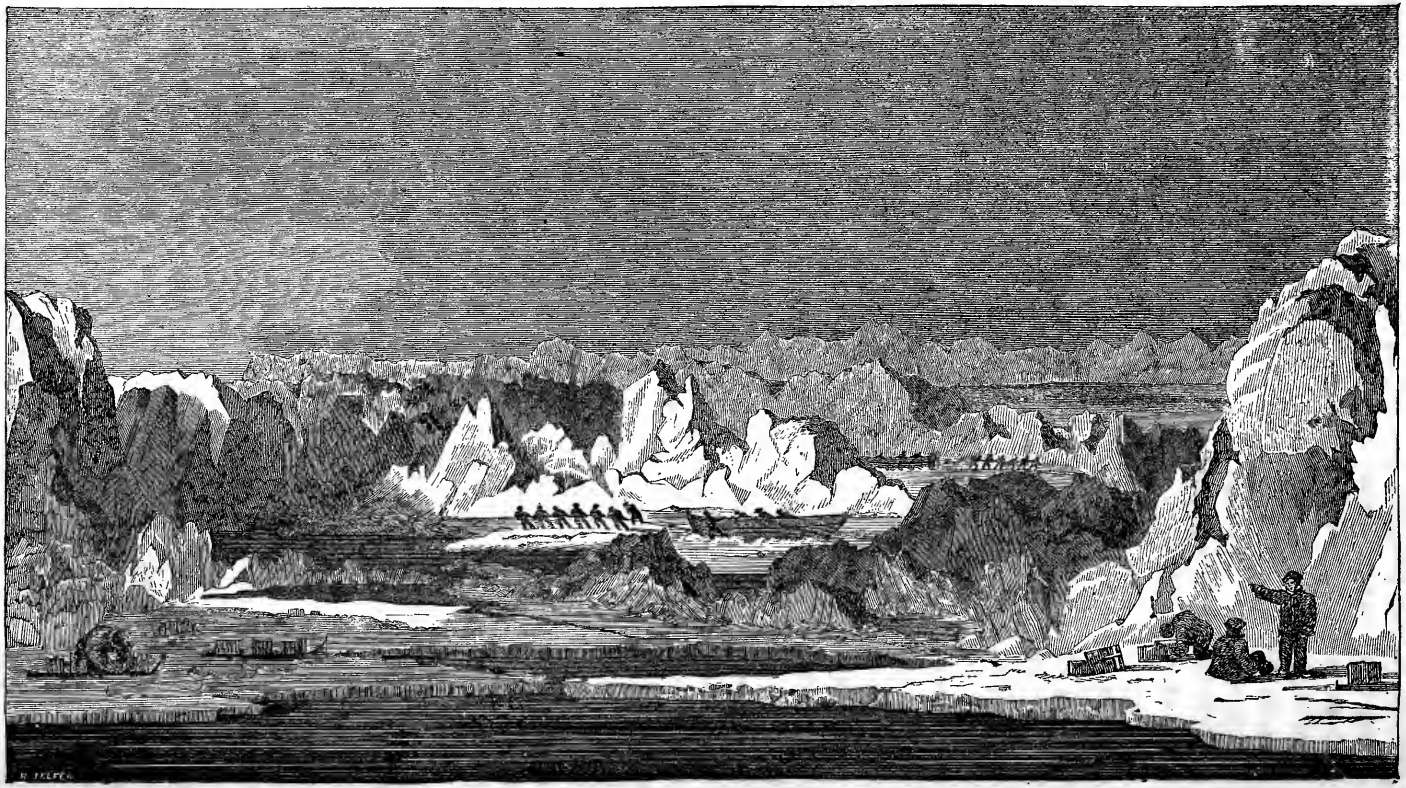
To the North of Melville Bay is an expanse of water, which is usually free from ice. This expanse is known to whalers by the name of North Water. The Advance met with no very serious obstruction, until she had passed Littleton Island, in latitude 78°. Here we hove to, for the

purpose of erecting a cairn and flag-staff. While detained in this manner—the weather being thick and foggy—the ice formed around the ship, and pinioned her, as it were, to the spot. We were obliged to wait a few days, when the ice fortunately relaxed, and our gallant vessel was released.

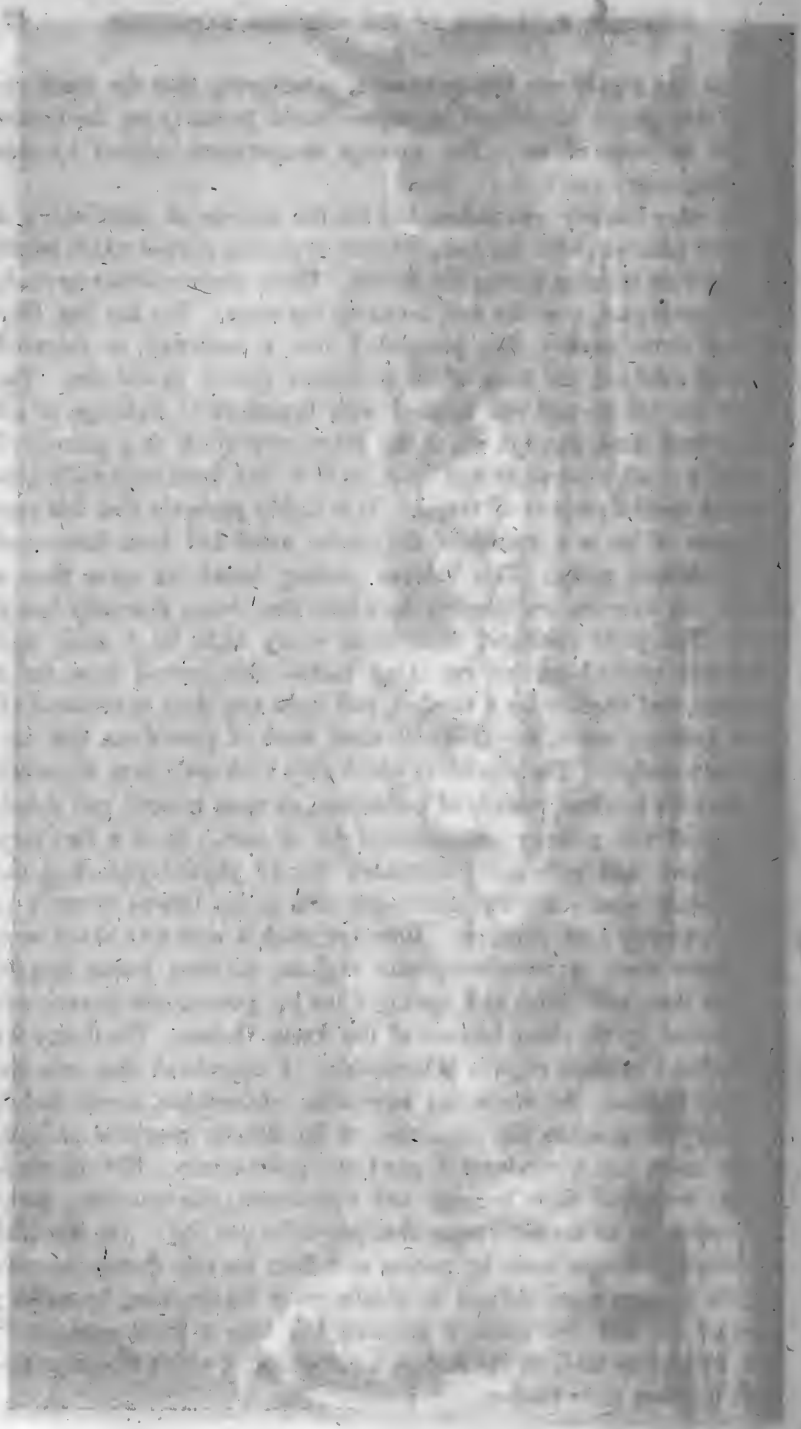
By means of persevering labor, we made some progress along the coast, where the ice was broken up somewhat by the rise and fall of the tide. Through the passages thus afforded, the ship was "warped" or forced along, by means of hawsers and lines wound around the capstan. This process is exceedingly toilsome and tedious, and tends much to dishearten the seamen; however, it was the only means of progression which circumstances afforded us.

Towards the close of the short-lived summer of this climate, the "bay ice," as it is called, begins to form. By this term the new ice, or the first ice of the season, is designated. This new formation being added to the old stock, makes the operations of the seamen still more difficult. On the present occasion, by the fourth or fifth day of September, the new ice had become strong enough to bear a man's weight, and before the middle of the same month it became necessary for the expedition to take winter quarters. The idea of passing several months among the dreary scenery of this region was gloomy and dispiriting enough, even to the most ardent temperament. However, we went to work energetically, and made all the preparations which promised to make our situation tolerable, if not comfortable. The ship had nearly reached the latitude of 78° 50′; but we were compelled to retrace our course for several miles, in order to find a place suitable for a winter harbor. The spot we selected for this purpose was in a bay, near three small islands, and only five hundred yards from the main land. In making our preparations for warmth and shelter, during our long incarceration, a house of boards was erected over the upper deck of the ship, the holds being first cleared of provisions, which were stowed away in a hut built for the purpose, on one of the small islands. Our cooking stove was set up between decks.

At this time several exploring parties were sent out to make observations by land. One of these parties penetrated inland, through the mountainous country, to the distance of fifty miles, where their progress was stopped by a large glacier; perhaps a portion of the same mass of ice which covers the whole interior of Greenland. This party consisted of three persons, who carried all their baggage on their backs. This baggage consisted of provisions and two small buffalo skins, intended to serve them for bed and bedding; and, as you may



SEEKING SECURE QUARTERS FOR THE NIGHT.



suppose, the supply was scanty enough, considering that the couch on which they might be obliged to repose would probably be the frozen ground or cakes of ice. The average temperature noticed by this travelling party was 10°.

The other journey was undertaken for the purpose of establishing a depot of provisions for the use of future exploring parties which might be sent from the ship during the winter. These excursionists travelled, for the most part, over the new ice along the coast. For the last fifty miles of their journey, they proceeded over a causeway, or elevated ridge of solid ice, the issue of an enormous glacier in the sea. The frozen sea all around was covered with innumerable icebergs, of all shapes and sizes, through which the ridge over which they journeyed formed a road as straight and level as if it had been artificially constructed for the purpose of travel. It is highly probable that this vast collection of ice is a branch of the glacier which had been discovered by the inland party. This hideous journey lasted for more than a month, the temperature through the whole time being generally below zero. The party sheltered themselves every night in a small tent which was pitched on the ice. One buffalo skin served them for a mattrass, and another for a blanket, and these two skins constituted all their bedding, which, together with their stock of provisions, was carried on a sledge. The provisions which they took with them amounted to about six hundred pounds of pemmican, or meat minced and dried, and mixed with a large proportion of fat or suet. It is a fact very well known and sufficiently accounted for by physiologists, that the most greasy messes are the most acceptable to the human stomach in these intensely cold climates. However much a man may abhor such provisions when in more temperate regions, he soon learns how to swallow them with relish and avidity when his gastronomic powers are invigorated by the sharp breezes of the Arctic Ocean. The desire for animal food in these regions is insatiable. I apprehend that any disciple of Graham, the renowned vegetarian philosopher, would find it necessary to abandon his principles, or his dietetic practices at least, if fate made him a wanderer beyond the polar circle. Notwithstanding the weight of their baggage and equipments, this travelling party proceeded, on an average, more than ten miles per day. On this and all future journeys made by parties sent from the ship during the winter, the tourists were obliged to obtain water for drinking by melting snow or ice, and this made it necessary to take a great quantity of fuel, alcohol or lard, on the sledge, a circumstance which tended greatly to increase their burden.

Nearly all of the Esquimaux dogs, and many of the Newfoundland ones, died in the early part of the winter. This extensive mortality was occasioned by a singular spasmodic disease, resembling the Asiatic cholera, which was very prevalent among the unfortunate quadrupeds; however, their untimely decease was a greater misfortune to us than to themselves; as it, probably, put an end to their troubles, but increased the magnitude of ours. This fatal canine epidemic was produced, as we supposed, by a change of climate and diet; though it was a remarkable circumstance of the case that the Newfoundland dogs appeared to bear these changes better than the Esquimaux animals, though the latter were natives of a more northern region.

The death of the dogs made the tasks of the men more laborious, as the duty of drawing the sledges now devolved upon them. The progress of the excursion parties was, likewise, much slower after we had lost the services of the canine teams, as the sledges could not be drawn more than ten or fifteen miles per diem by the men, while the dogs drew them, with ease, from forty to sixty miles.

CHAPTER IV.

OUR SITUATION BECOMES MORE AND MORE UNPLEASANT—THE ARCTIC WINTER SETS IN—INTENSE COLD, AND ITS SURPRISING EFFECTS—POLAR SCENERY—DREADFUL SUFFERINGS OF OUR EXCURSION PARTIES—WE ARE VISITED BY THE SAVAGE ESQUIMAUX—THEIR PERSONAL APPEARANCE, DRESS, MANNERS, AND CHARACTER.

The increasing darkness and cold made long excursions from the ship too perilous to be thought of during the remainder of the winter. The sun had disappeared on the 16th of October; its last beams were seen shining rather dimly on the tops of the highest hills four days later, and this was our latest glimpse of the celestial luminary, until the arrival of the 24th day of February, in the following year, (1854). From the time of the sun's disappearance, the atmosphere became darker and darker every day. The twilight, which appeared at the commencement of the Arctic night of three thousand hours, and which was visible daily about 12 o'clock M., became dimmer and dimmer, from the early part of November to the middle of January, when it was a little brighter on the southern horizon, at noon, than it was at midnight. Only for a small part of each month, did the moon offer us the use of her pallid lamp, which sufficed, however, to show the vast desolation which surrounded us, and to give a more ghastly and appalling effect to the funeral silence which hung over the scene. The mountains, which bounded the horizon on one hand, were covered with a shroud-like mass of snow, relieved at some particular points by a few black cliffs—the precipitous form of which would not afford a lodgment for the snowy mantle.

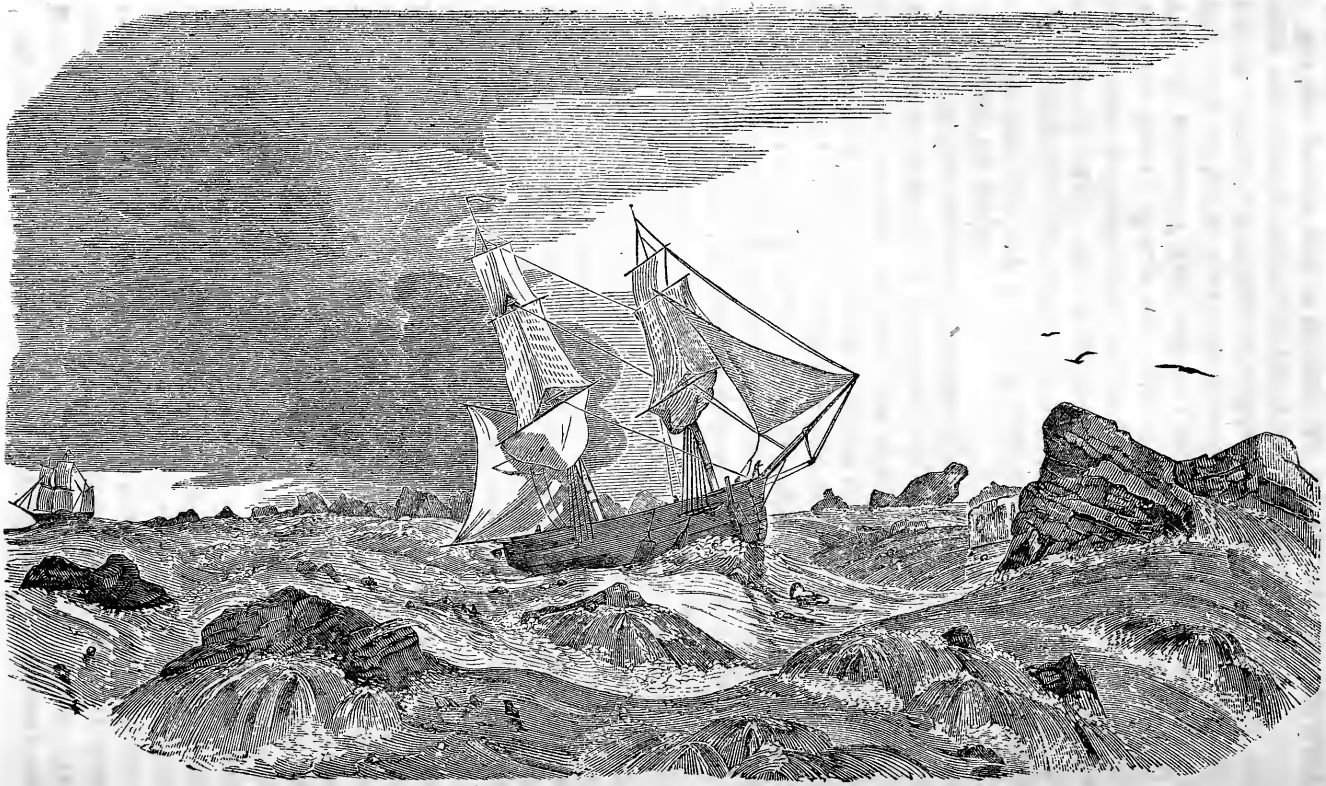
The moonlight gave a singular, I had almost said an unnatural brilliancy to the night—the radiance of the lunar orb being much increased by the reflex from the white surface of the sea and land. When the moon disappeared, "primeval darkness" seemed to return. The aurora borealis was often visible, but its light was too feeble to have any perceptible effect on the "solid darkness."

The cold increased simultaneously with the darkness. Mercury was frozen from the latter part of November to the end of March. The exhalation from our lungs began to congeal on our whiskers and moustaches as soon as we left the ship, and our beards, which we cultivated as a useful article of dress, became solid masses of ice, giving us all the appearance of venerable patriarchs; even our eyelids were encased with ice formed by the freezing vapor; the hair and all the clothing near the head were coated with a thick frost, like a wedding cake. Whenever we looked at each other, we could scarcely refrain from laughing, although our sufferings generally disposed us to be serious. Any article exposed to the air was almost immediately congealed; mercury, spirits and molasses became solid, or acquired a gum-like consistence. Inside the ship, everything which was not directly exposed to the heated air soon obtained a coating of ice. Our occupations on board were various; some of us passed several hours of each day in making scientific observations, and preparing for the spring journeys. Some employed themselves in reading, writing letters, &c. Various pastimes were devised, chiefly for the entertainment of the seamen, to whom this tedious imprisonment seemed to be an almost insupportable affliction. Among other amusements, we had private theatricals, and several of our performers might have been termed north-stars, as they succeeded in eliciting thunders of applause from the Arctic audience.

Our people enjoyed better health and more comfort during the winter than we had much reason to expect. When daylight began to return, we were amazed at the strange and rather awful appearance of each other's faces. Our complexions had become so pallid that we all looked like a company of ghosts, such as that which Homer represents Mercury as conducting to the infernal shades. This appearance I ascribe to the long absence of the solar light; it was not discoverable by the light of the lamps.

On the 24th day of February the sun once more shone on the tops of the mountains, and a few days later his beams began to gild the tops of our masts. The re-appearance of the blessed luminary was hailed with the enthusiastic cheers and acclamations of our people, with the display of flags and other demonstrations of grateful joy. The long absence of light and heat, those two important elements of life, could not fail to have some depressing influence upon our minds; but all sadness and discontent vanished as soon as the light of day came once more to cheer us in this frozen wilderness.

For the greater part of the time the sky was perfectly unclouded. Although we now had glimpses of sunlight, the cold was unabated. In



IN A GALE AMONG THE ICE.

fact some of the coldest weather we experienced was in the month of February, after the Arctic dawn had commenced. On several occasions within this month, the temperature was more than 60° Fahrenheit below zero. Such a low temperature would have been insupportable by any human constitution, perhaps, had it been accompanied by wind; but fortunately, the atmosphere was generally calm on the coldest days. The harbor in which the brig wintered was so well sheltered from rough weather that my observations on the temperature can give no perfect idea of the severity of the season in more exposed situations. Comparisons of the temperature observed in the early part of the season by our sledge parties, showed that the cold was more severe by several degrees outside of the harbor than it was within, though all possible care was taken to secure our thermometers from any local or artificial influence which might be produced on shipboard. It was our general practice to place the thermometers on posts stuck in the ice hundreds of yards from the ship.

The principal occupation of the officers and men now consisted in making active preparations for the spring journeys. Among the equipments provided were canvas boots, blanket-bags, large enough for one man to sleep in, reindeer skin stockings, mittens of the same material, and canvas tents of improved construction, the inside of which was far more comfortable than that of an ordinary tent. Many other articles, of minor importance, were also provided for our vernal excursions. About the 17th day of March, a party, well equipped in every respect, was ready to leave the ship. This party consisted of eight persons, who were commissioned to make a depot of provisions, (about five hundred pounds of pemmican,) on the opposite side of the channel in which our ship was stationed. This channel takes a north-easterly direction. It was found expedient to cross it in a northern direction and to establish the depot on the north-west shore The provisions thus deposited, were intended for the use of another party, which had been appointed to continue the search to the north and west from that point which had been reached by the party sent out in the preceding autumn. The severe cold and the difficulties of the icy path, made their journey the most painful and troublesome one, that was ever accomplished by mortal man. To give some idea of the embarrassments, occasioned by the frigid atmosphere which our travellers met with, it may be mentioned that it required more than two hours to cook a meal or boil a little coffee, and when these articles were prepared, it was necessary to swallow them as expeditiously as possible, or they would be frozen before they went down. The lodging, on the first night of the

excursion, was tolerably comfortable; each sleeper being enveloped in the fur clothing which he usually wore, placed himself in a blanket-bag, and then stretched himself on the buffalo-skin mattrass on the icy floor of the tent, after which he tucked himself under the buffalo-skin cover-lid. These arrangements answered very well for several nights, but the evaporation from the bodies of the sleepers became condensed on the blanket-bags and buffalo-skins, which acquired a lining of ice as soon as the men emerged from them in the morning, and after this, these bed-clothes were stiffly frozen, when they were required for use at night. The tent was covered on the inside with frozen vapor, which hung in large flocs, and fell off like a heavy shower of snow, with the slightest shaking. The temperature inside of the tent, when the whole party was in it, was seldom warmer than 20° below zero; while on the outside, the air was twenty or thirty degrees colder.

A few miles from the ship, the travellers found the ice exceedingly rough and full of ridges or hummocks, which made travelling very laborious. Very often it required great exertions to get the sledge over the hummocks, and sometimes this could not be done without unloading. The labor of these operations was so great that, notwithstanding the severity of the cold, the men were often thrown into profuse perspirations, and this was soon followed by freezing, the clothes being frozen together so firmly that they were not thawed asunder until the men entered their sleeping-bags. So many hardships and obstacles defeated the objects of the journey, and the travellers, finding that they could not reach their point of destination at the prescribed time, returned to the ship. Their progress had been distressingly slow and toilsome. When they had proceeded about forty miles, the feet of several of the party were badly frost-bitten after a day's march over the ice, with the temperature of the air 40° or 50° below zero, and a fresh wind blowing from the north-east. On the following morning the feet of four of the party were found to be so badly frozen as to make it impossible for them to walk. The other four were not able to transport them on the sledge, and so it became necessary to leave one to take charge of the sick, while three went back to the ship for assistance. After a painful journey of thirteen hours they arrived at the ship, and almost immediately after started again at the head of a new party, to carry comfort and succor to their disabled comrades. This last party, on account of the haste with which it was fitted out, could not be very well equipped for the journey, and the sufferings of the poor fellows are not to be described. The temperature during the whole time they were *en route*, was more than 40° below zero; and to make

matters still worse, there was a hard and piercing wind. Nevertheless they reached the tent, and succeeded in conveying the half-frozen occupants back to the ship, where two of them died a few days after, mortification having supervened in their frozen limbs; and two others lost several toes each. It was a long time before the other members of this party recovered from the effects of the severe hardships and exposures to which they had been subjected.

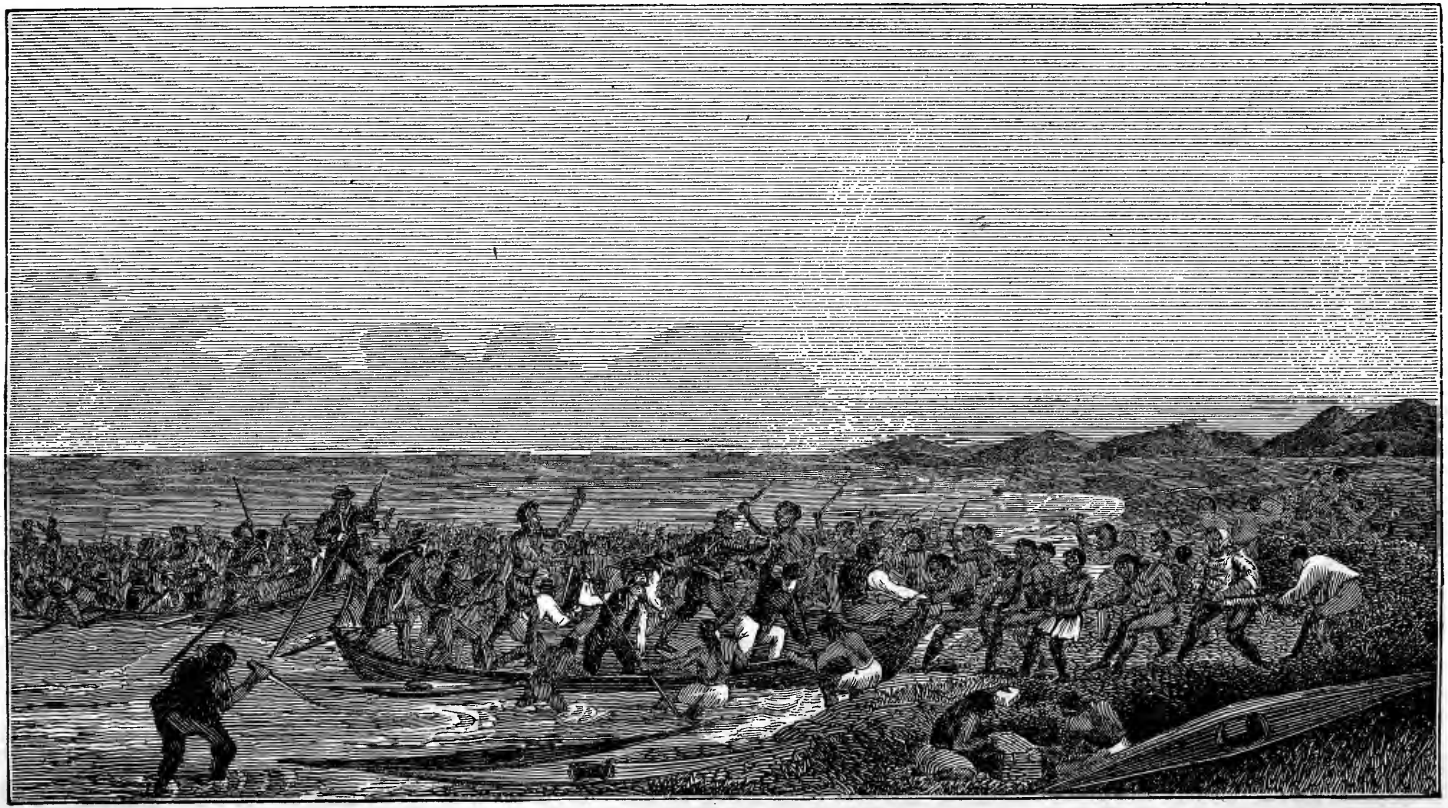
The unfortunate issue of this journey occasioned considerable delay in the fitting out of another excursion party, which did not leave the ship before the last day of April. In the meantime the ship was visited by some savage Esquimaux, of very wild and grotesque appearance. While we were sailing up the channel, about thirty miles south-westerly from our winter harbor, we descried an Esquimaux hut, which exhibited all the signs of having been inhabited a short time previous. Some fresh meat and two bags containing blubber were found in it. Besides this, many other ruins or remains of Esquimaux habitations were found: also, graves, fox-traps, and other indications of a country lately inhabited, were discovered all along the coast. We were convinced, therefore, that this large tract of country must have been very densely populated at some former and not very remote period.

The Esquimaux savages who visited us came in sledges drawn by dogs; about seven or eight of the quadrupeds being attached to each sledge. These people were dressed in "jackets" or jumpers of foxskin, with hoods to protect their heads from the weather. Under their hooded jackets they wore vests or shirts of seal-skin, or the skin of some aquatic bird. They had likewise short pantaloons or "inexpressibles," made of the hides of polar bears, and boots of seal-skins, and dog-skin stockings completed their picturesque apparel; to procure which they seemed to have made extensive drafts on the animal kingdom. Their hands were covered with bear-skin mittens.

The fur side of all the skins, except those which composed their stockings, were turned outwards. They had long black hair, which was divided in the middle, and hung down on each side to their waists. Their complexion was a light-brown. Their eyes were large, or rather long, and appeared to be placed in a more oblique position than the eyes of the human species usually are; the outer angle being elevated towards the forehead. Their noses were invariably small, broad and flat. The large mouth exhibited a set of strong white teeth; their cheeks were extremely fat, and had a puffed-out appearance, but their hands and feet were small, though not exactly of a shape which I should call delicate. Some of them had small beards, but the majority of

them were unprovided with such ornaments. In stature, they were not much below the average height of Europeans and the men of the United States. There were several females among the party, whose appearance was not at all fascinating, but some of the sailors, who are apt to have eccentric tastes in such matters, endeavored to improve their acquaintance with these Arctic ladies; and I suspect that they found them less frigidly repulsive than their climate. These visitors approached our ship on both sides, having left their sledges at some distance. They appeared to be but little alarmed or embarrassed on finding themselves in strange company, and we were soon enabled to carry on an intelligible conversation through Mr. Petersen, our Danish interpreter, and the Esquimaux boy whom, as mentioned before, we shipped on the southern coast of Greenland. They showed a great fancy for articles or utensils composed of wood or iron, and were much delighted with several small presents of that kind. Everything on board seemed to excite their curiosity; they were very inquisitive, and tormented us with questions on every subject which occurred to them. One thing seemed to surprise them in a high degree, viz: that we should come on such a long journey without bringing any women with us, and they remarked that our condition must be very cheerless and disconsolate in the total absence of the other sex. Nothing, (they averred,) could induce *them* to submit to a similar privation. Their conversation, the details of which will not answer for publication, occasioned much merriment among our junior companions. These savages appear to be of a sanguine and jovial disposition, and their visit afforded a very acceptable relief to the tedium and monotony of our polar life. They showed very little relish for tea, coffee or any article of diet on board of our vessel, and what surprised us still more—they did not tax our *liquid* hospitality, showing no inclination for brandy, spirits, &c. They would drink nothing but pure water, an example of teetotalism which we certainly did not expect from them, as we had heard some account of the bibulous propensities of savage tribes in general. The stories told by some travellers respecting the fondness of the Esquimaux for train oil, as a beverage, appear to be slanderous and without foundation; none of those whom we met were inclined to any such practice, but treated all invitations to imbibe such greasy liquids as a mere joke.

It is generally believed that people of a merry temper are disposed to be honest; but this characteristic description would not apply to our Esquimaux visitors. They laughed almost incessantly, but were always on the alert when an opportunity to steal something was presented to them. Knives, forks, spoons, and other small metallic articles, seemed



ESQUIMAUX ATTACKING THE BOATS.

to be the principal objects of their cupidity. Some aspired to more considerable larcenies, attempting to possess themselves of our buckets, tinware, crockery, &c., and one fellow put himself to the trouble of conveying half a barrel of coal to his sledge, with the intention of carrying it off. In short, their love of thieving was so inordinate, that no portable article was safe within their reach, and they were as adroit in these felonious operations as any well trained "prig" in the christianised cities of Europe or America. When detected in a theft, they returned the stolen article very good-humoredly, without exhibiting the least shame or compunction. One of our india rubber boats, which had been left on the ice about six miles from the ship, had been found by them, and they immediately cut it open; the floats which were left around it were likewise cut in two by these worthy gentlemen. This was probably done from motives of curiosity, the same feeling which impels children to dissect their toys, in order to discover what is inside of them.

The Esquimaux will sometimes attack boats, for the purpose of robbing them, if the crews are not sufficient in number to protect themselves. In Sir John Franklin's second expedition, July 1826, the crews of two boats were attacked by hundreds of these savages, who attempted a general massacre of the Englishmen, but did not succeed. On another occasion, Captain Franklin himself was beset by two powerful chiefs in one of his own boats. They grasped him by the shoulders, and held him fast; he shook them off several times, and stood on the defensive until a third chief grasped him by the arm, and thus prevented him from using his knife or pistol. They then attempted to paddle the boat to the shore, Captain Franklin being still held firmly by some of their party. As if to pacify him, the chiefs tapped him gently on the breast repeating the word "Seyma." As they approached the beach, two omeaks, filled with women, met them, and filled the air with exclamations of delight on account of the prize which they supposed their countrymen had obtained. The Captain having been thus secured, as they thought, on shore, the Esquimaux men stripped themselves to the waists, drew their knives, and rushed to the other English boats, as if resolved on murder and pillage. Lieut. Back, and his crew, resisted manfully, and succeeded in rescuing many articles from the grasp of the robbers. However, the English were overpowered, and one of the Esquimaux had the audacity to snatch Franklin's knife and cut the buttons from his waistcoat. Many times during this scuffle the savages tried to carry off the box of astronomical instruments, but one of the sailors secured it by tying it to his leg, resolved, that, if they took it

away, he would be dragged off with it. The crews of the English boats were harassed and maltreated in this way for several hours, until the commander directed his interpreter to tell the Esquimaux that he would order his men to shoot all of them who came within reach of their muskets. This had the desired effect; the thievish villains desisted from their operations; but they had already stolen many things of incalculable value to the exploring party.

This account will show that the Esquimaux know how to make themselves unpleasant neighbors and disagreeable guests, when they take a fancy to do so, and a fair opportunity offers.

CHAPTER V.

SOME ACCOUNT OF THE ESQUIMAUX DOGS—THEIR SINGULAR HABITS AND GREAT UTILITY—FURTHER ACCOUNT OF THE MANNERS, CUSTOMS, AND SUPERSTITIONS OF THE SAVAGE ESQUIMAUX—WE OBTAIN ANOTHER DOG-TEAM, AND SEND OUT TWO NEW TRAVELLING PARTIES, ONE COMMANDED BY DR. KANE IN PERSON.

The Esquimaux dogs, so highly celebrated for their utility as draught animals, have an extremely wolfish appearance. The head is long, the nose black, they have stiff, upright ears, like those of the wolf, and their hair or fur very much resembles that of the last named animal. Some of their habits are very remarkable. Every day they held regular meetings, for what purpose we could not ascertain. One of the canine assemblage, who appeared to be the orator of the day, began to howl in a very impressive manner, curving his back and fixing his eyes very earnestly on the sky. After a while all the others began to howl likewise, producing a grand concert of vocal music, which the human portion of the auditory had not taste enough to appreciate. Their general appearance at these meetings is melancholy; the chief speaker, or solo performer, might, to a fanciful observer, be supposed to commence the performance with a descant on the troubles and afflictions incident to a dog's life in the polar regions; after which, the whole congregation unite in a grand chorus, to express their perfect agreement with the orator's views and sentiments.

Notwithstanding all this display of fine feeling and delicate sensibility, these dogs sometimes exhibit a very cruel and ferocious temper. Troops of them have been known to attack men and to devour children who happened to fall in their way. Greenlanders are sometimes killed by them, and when this happens, every bone of the victim is cleanly picked by the hungry brutes. In fact, to a solitary traveller the appearance of a troop of them is scarcely less formidable than that of a gang of wolves. Their size is very little less than that of a Newfoundland dog;

they have long bushy tails, which they carry in an elevated position over their backs, except when they are fatigued or hungry. By this sign the wayfarer may often judge when an attack by them is to be apprehended. For, unlike pirates or buccaneers, who hoist their flags when they design to make an assault, these canine freebooters of the North *lower* their caudal banners when starvation impels them to battle. The representatives of the canine race in this region do not bark, as civilized dogs are accustomed to do. Barking is one of those acquirements of the species which come by cultivation and an improved state of society; although, like it is with many other improvements which follow in the track of civilization, its blessings or benefits are not very obvious.

ESQUIMAUX DOG—IN HARNESS.

When these dogs are taken into service by an Esquimaux, they are fed by their employers, in the summer season, once or twice in each week. In winter, their supply of food is still more scanty and unfrequent, except when they are engaged in actual service, at which times their tasks are very severe. In these circumstances they are supplied with one full meal every day, or every second day, at farthest. Their food is similar in kind to that used by their masters, consisting,

BUILDING A SNOW FENCE, DURING A STORM.

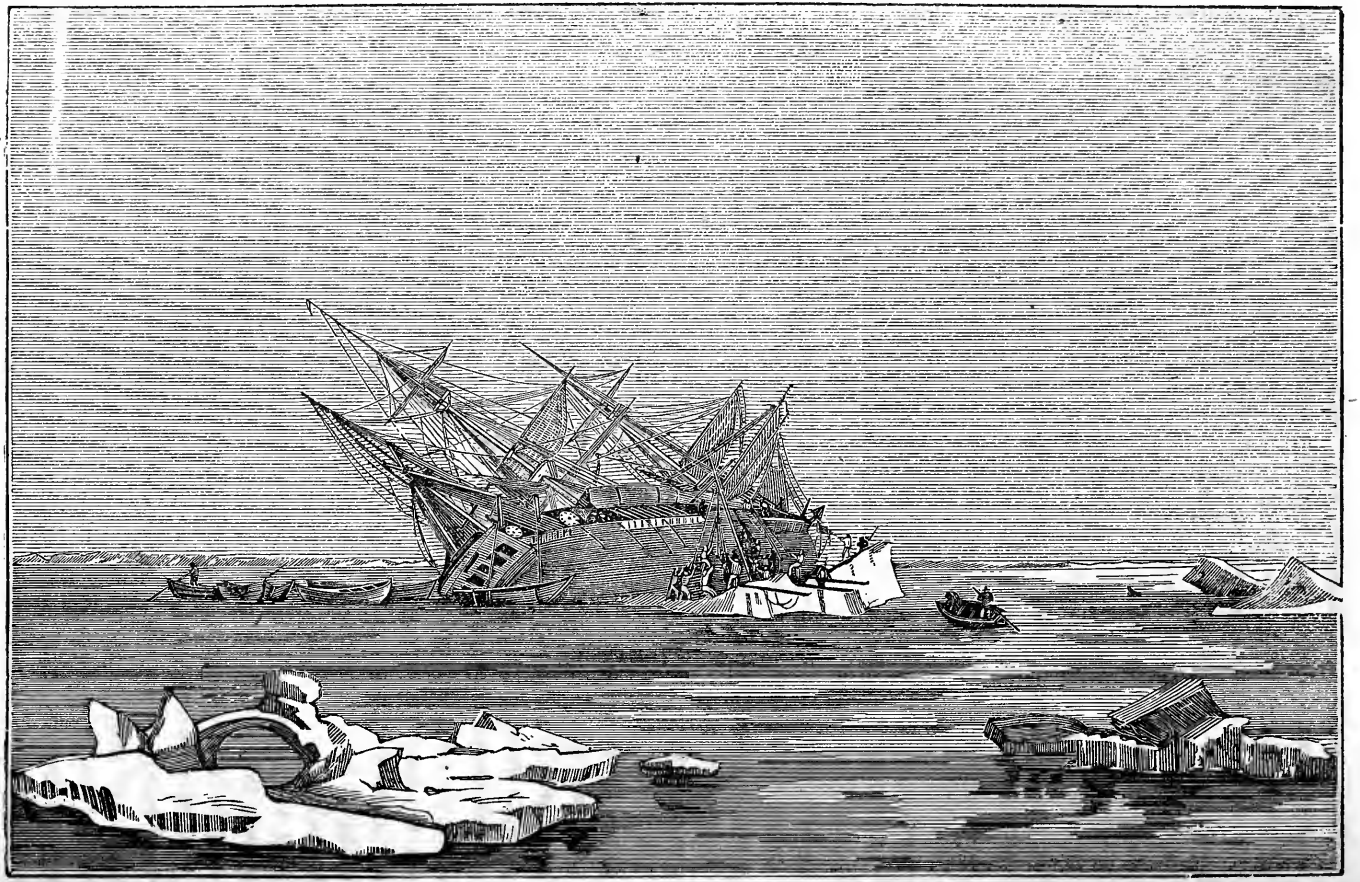
for the most part, of the flesh of the seal, bear or walrus, but this meat is seldom or never given to the dogs unless it happens to be in a spoiled condition. The dogs are sometimes fed with pieces of walrus skin, frozen and cut up in small shreds. When seals happen to be very plentiful, a whole one, stripped of the blubber, is sometimes given to the dogs. However, as these animals have large appetites, they often suffer greatly on account of a deficiency of food. When anything eatable is thrown to them it is commonly torn to pieces and swallowed before it reaches the ground. When they are feeding, their ferocity is such that they would kill each other while fighting for the provisions, if whips and staves were not in constant use to keep them in order; on this account some of the men, armed with weapons of terror and punishment, are obliged to superintend their Scythian banquets.

When these brutes are harnessed for service, each dog is attached to the sledge by a line of seal or walrus skin. All run in one rank, at equal distances from the sledge. They are guided and controlled by the voice of the driver and the whip. Their speed and power of traction are wonderful. A team of six or seven dogs will draw a sledge, laden with three men and baggage, at the the rate of fifty or sixty miles per day. On the ice, when it is level and there is not much snow on it, the progress is usually eight or ten miles per hour. Every dog keeps his place in the rank with great precision, unless thrown out by some unavoidable cause; in that case, he immediately leaps back into his proper station. When travelling over rough ice, or hummocks, the Esquimaux dismounts and goes behind the sledge, where he takes hold of two pieces of wood which project like the handles of a plough. By this means, he guides the sledge, and helps it over the ridges and inequalities of the route.

The sledge is supported on two runners, composed of wood and bone, the part which touches the ice being constructed entirely of the last-named material. Many pieces of both substances are lashed together with thongs of seal skin, so as to obtain a length of about seven feet, and a breadth of eight inches. These runners are formed in a very artistical manner, care being taken that the leathern strips which fasten the work together should not be exposed to any friction, as that would soon separate the parts. In front, the runners are slightly turned up. Pieces of wood and bone, about eighteen inches in length, are lashed cross-wise to these runners. At the back of the sledge there are two upright posts, about two feet long, to the tops of which a transverse bar is fastened. This dorsal fixture, when it is covered with a buffalo skin, supports the back of the driver, and when the travelling is very much

embarrassed with hillocks and ridges of ice, the same fixture serves for a handle, by means of which the dismounted traveller may lift his vehicle over the obstacles of the road, as I have mentioned before. The transverse bar is used, moreover, to hang hunting lines on, when the Esquimaux driver is engaged in a venatic enterprise. These hunting lines are made by cutting the skin of a seal from the dead body of the animal, not lengthwise, as usual, but around the carcass, and removing it in a narrow spiral strip. In this way a very strong lasso is obtained; and one great advantage of this kind of lines is that they will not break when they have been soaked in water and afterwards frozen stiff. On the sledge a large seal-skin bag, similar in construction to one of Uncle Sam's mail-bags, is placed as a receptacle for pieces of meat, knives, and other articles intended to be used on the journey. The Esquimaux tourists usually carry some kind of arms with them, likewise, when travelling. Their principal weapons, on such occasions, are a lance and a harpoon. The staff or shaft of each of these weapons is commonly formed of the horn of the narwhal, several pieces of which are lashed together so as to make a pole about two inches in diameter and five or six feet long. The lower part or handle is made of ivory. The blade is of iron, and is shaped like a half-moon. These spears and harpoons are used both in hunting and warfare, and they have no other implements, except their knives and hunting-lines, for either occupation. The seal-skin boats, or *kaiaks*, which are used by the Esquimaux of the Danish settlements, on the western coast of Greenland, are not known, or at least not used by the savage tribe which I am now describing.

The dress of the Esquimaux women who visited our ship differed very little from that of the men; the principal variation was that their pantaloons were shorter and their boots higher. Their hair was gathered up in knots, and tied on top of their heads. As I have hinted before, their personal beauty, either of form or feature, was not of the most attractive character; but they found some admirers among our sailors, whose attentions did not occasion any outbursts of jealous passion among the males of the visiting party. Their *sang froid* in these circumstances was as admirable as that of any married gentleman of France or Italy. In joviality of disposition the Esquimaux women even transcend the men, although the latter are the most jolly fellows that ever my "conversation coped withal," in any climate, rank, or condition. They were all, male and female, very hospitably received on board of our vessel. It appeared from their conversation that they had no other idea of the object of our expedition than that we came



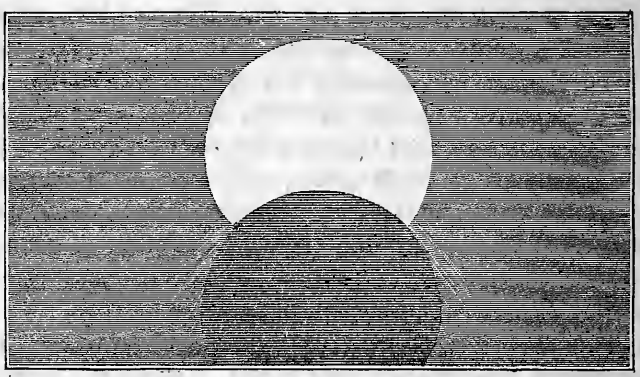
SITUATION AFTER THE DISRUPTION OF THE ICE.

to their country for the purpose of hunting, which is the only business or pursuit of which they have any notion. Not being able to comprehend the operations of weaving, they believed the linen, cotton, or woollen cloths on board of the ship to be the skins of some kinds of animals. White linen they supposed to be the skins of our own countrymen, a mistake which was very complimentary to the fair complexions of the Anglo-Saxon race. Bread they took to be the dried meat of the musk ox, an animal of which many remains, skulls especially, are seen in that country, though no living specimens are now to be found.

The origin of the white race is thus accounted for by these savages: An Esquimaux woman once had the ill-luck to give birth to several deformed children. Being ashamed of her offspring, she put them into a shoe, and set them a-drift in the sea. The shoe increased prodigiously in bulk, changed its form, and became a ship, and the mis-shapen Esquimaux brats became men and women of a burlesqued pattern, with hideously pale faces, and forms of an unseemly outline, unlike that of their elegant and handsome Esquimaux ancestors. From this account of our origin, you may judge how they estimate the beauty and excellence of the Causasian branch of the human family.

They tell a somewhat imaginative story, concerning the sun and moon, which exceeds in extravagance any parable of Grecian or Egyptian origin. The sun, as they report, was once a fair Esquimaux maiden, bearing the pretty name of Melina. The moon was formerly her brother. She had often observed, when the light in the hut was extinguished, that she was approached and caressed by some unseen lover. In order to discover who he was, she stained her hand with lampblack, and when her invisible adorer made his next nocturnal visit, she applied her hand to his face, and made a mark by which he might be distinguished when the lamp was re-lighted. By this means she discovered that her clandestine lover was her own brother. Horrified at this discovery, she fled from the hut, pursued by the iniquitous young rascal, who chased her over sea and land, until they came to the verge of the horizon, where she sprung up into the sky, or was conveyed thither by some divinity, who pitied her misfortunes. Her form was now changed, and became still brighter and more beautiful than it was before. In short, she was transformed to the solar luminary. The wicked lad, who still followed, was changed in like manner to the moon, and the chase is still continued through the azure fields of heaven. The face of the incestuous lover still bears the mark of lampblack; the same mark which the inhabitants of other countries have mistaken for "the man in the moon."

Our Esquimaux guests informed us that they had seen an unusual appearance in the skies, some years ago, (referring to the solar eclipse of 1825,) and they concluded from thence that the two lovers (the sun and moon) had come in actual collision at last. The eclipse, as it appeared in that latitude, greatly alarmed them, their seers and wise men predicting that it would be followed by disastrous consequences. A correct view of this natural phenomenon as it presented itself to Captain Franklin and his companions on board of their ship, in Baffin's Bay, will be found below.



ECLIPSE OF THE SUN.

The drawing was made by one of the party and is certified to be perfectly accurate.

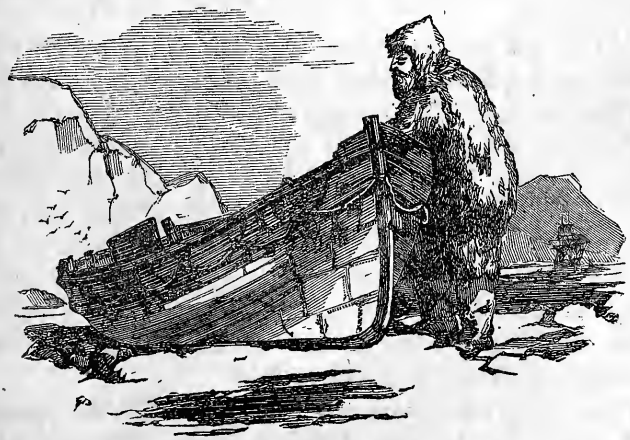
A belief in the metempsychosis prevails in this country; but the inhabitants are too fond of animal food to adopt the rule and regimen of the Pythagoreans. They suppose that the soul of a deceased Esquimaux passes into some animal of a certain species; and they pretend to know, in every case, what species it is. The relatives of the deceased, therefore, for a certain length of time, abstain from the flesh of that species of which some individual is supposed to be the present abode of their departed friend. Unluckily they do not know what individual contains the transmigrated spirit, and so it is a matter of conscience with them to reject as food all animals of the kind, lest they should happen to devour their own kindred.

They have many ceremonies which correspond with the mourning of civilized people for the death of their relations. When an interment takes place, all the hunting apparatus and the personal equipments of the deceased are buried with him, according to the custom of the abo-

rigines of the southern portions of the American continent. For some days after the funeral no fire is kept in the hut inhabited by the surviving relations of the deceased. The mourners keep their heads covered for a certain time with the hoods of their jackets. They weep a great deal, even a long time after their departed friends are buried, especially when they happen to be the subject of conversation; and all strangers who are present at the time are expected to weep likewise.

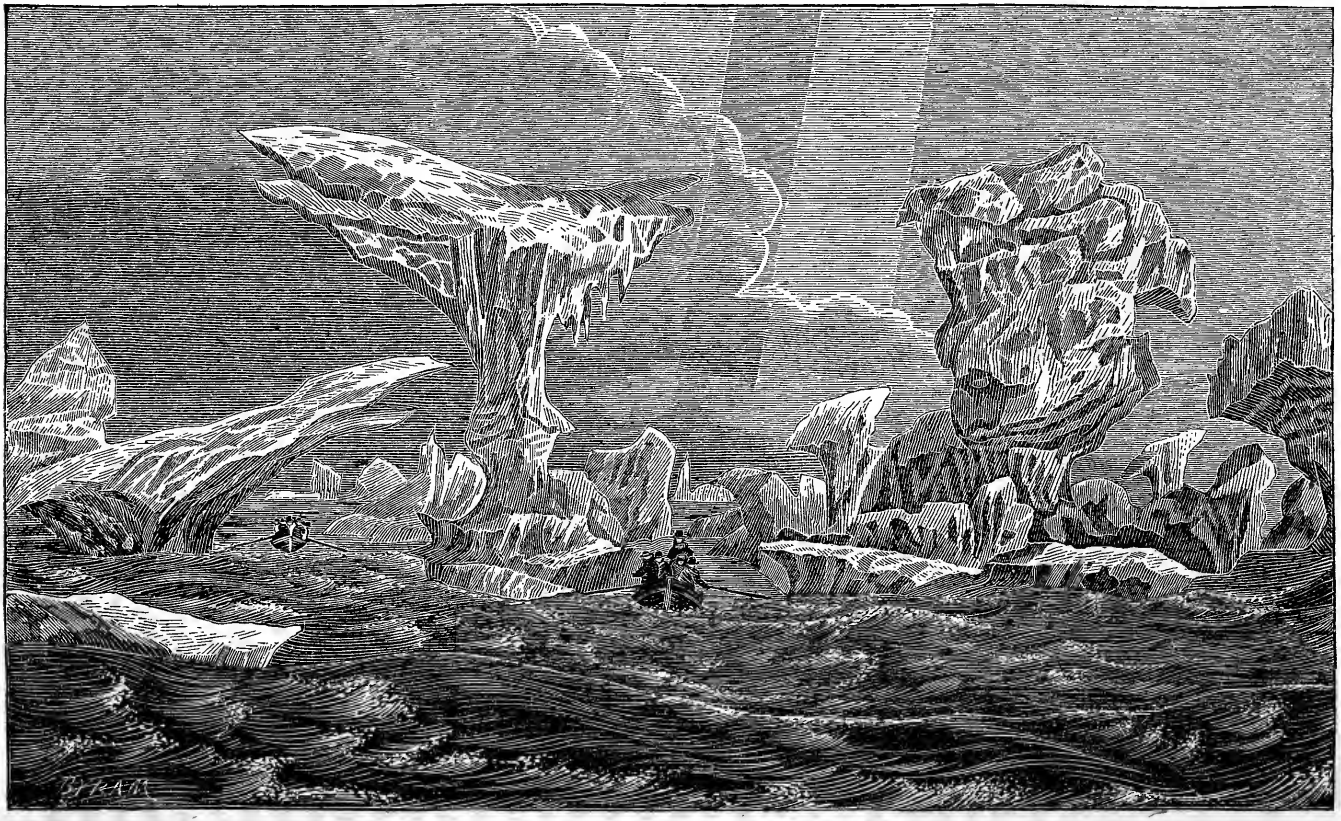
We obtained some dogs from the Esquimaux, in exchange for knives, poles and planks. These dogs, together with a few which survived the winter on ship-board, were sufficient to form one team. The expedition, therefore, had the use of one dog-sledge, at least, with seven powerful dogs to draw it. This sledge, and another drawn by men, were fitted out for another excursion, the travelling party, in this case, being commanded by Dr. Kane himself. It left the ship about the latter end of April, intending to pursue the search as much as possible according to the plan which has been mentioned before in this narrative. But only a few days after the party started, the leader was taken sick, and was obliged to return. This party, and the preceding one of autumn, 1853, had followed the north-eastern shore of Smith's Sound; or more properly, the sea-coast above that locality.

Still another party, consisting of two persons only, with the dog-sledge, was now sent out, with instructions to cross the channel in a northerly direction, and to search the north-western coast. This party travelled in the month of May, carrying with them scarcely anything



OUR SMALL BOAT.

except a sufficiency of provisions, consisting entirely of pemmican, to serve themselves and the dogs for one fortnight, and two blanket-bags for sleeping in. The ice was still much in the same condition as was observed by the party which left in the preceding March. The same route which that party had taken was now followed up, the travellers proceeding with as much rapidity as possible over the unequal surface, the ridges and hillocks of ice often compelling them to dismount and lift their sledge over the obstructions. In this way they succeeded in crossing the channel, which is about seventy miles wide, and they made land on the western coast, in latitude 79° 50′. Their provisions and equipments were not sufficient to justify them in attempting a journey towards the north; they therefore proceeded southwardly, along the west coast, and explored about forty miles of the coast-line without meeting with any traces of Sir John Franklin. The mountains on this coast are much higher than those on the eastern coast. Several deep bays and two islands were discovered. The interior of these islands appeared to be covered with a glacier, and in this respect, the country resembled that on the east side of the channel. The snow was very deep, which made the travelling extremely laborious; but a much greater discouragement now presented itself. The stock of provisions was exhausted, as it was impossible to carry a large amount of them on our sledge, and two men, together with seven dogs, require a considerable stock of victuals in a climate like this, where every individual eats four times as much as he could in a more temperate region. For the last two days of the journey, the travellers were obliged to put themselves on very short allowance, and, of course, were much less able to endure the cold. That these privations in the way of eating were rather severe may be judged from the fact that they were obliged on the last days of their journey, to breakfast, dine and sup on their own seal-skin boots and pantaloons; dishes which cannot be supposed to have been very palatable or digestible; and, besides, these articles of apparel could not very well be spared for the purposes of refection, when the low temperature of the air made a large supply of clothing necessary. They journeyed for the last seventy miles of their trip, with no better provision than that which has just been mentioned, cutting pieces from their boots and pantaloons, and masticating these dainty morsels as they proceeded. The reflex of light from the surface of the snow affected their eyes to that degree that they were almost blinded, and suffered severely from pains in the visual organs. One of them was entirely deprived of sight during the latter part of the journey, and for several days after his return. It strikes me that this



OUR PERILOUS JOURNEY HOMEWARD.

inconvenience might have been prevented, in some measure, at least, by wearing a shade of thin green silk over the eyes, to mitigate the intensity of the light. I would recommend Arctic travellers who find themselves in similar circumstances, to try the experiment.

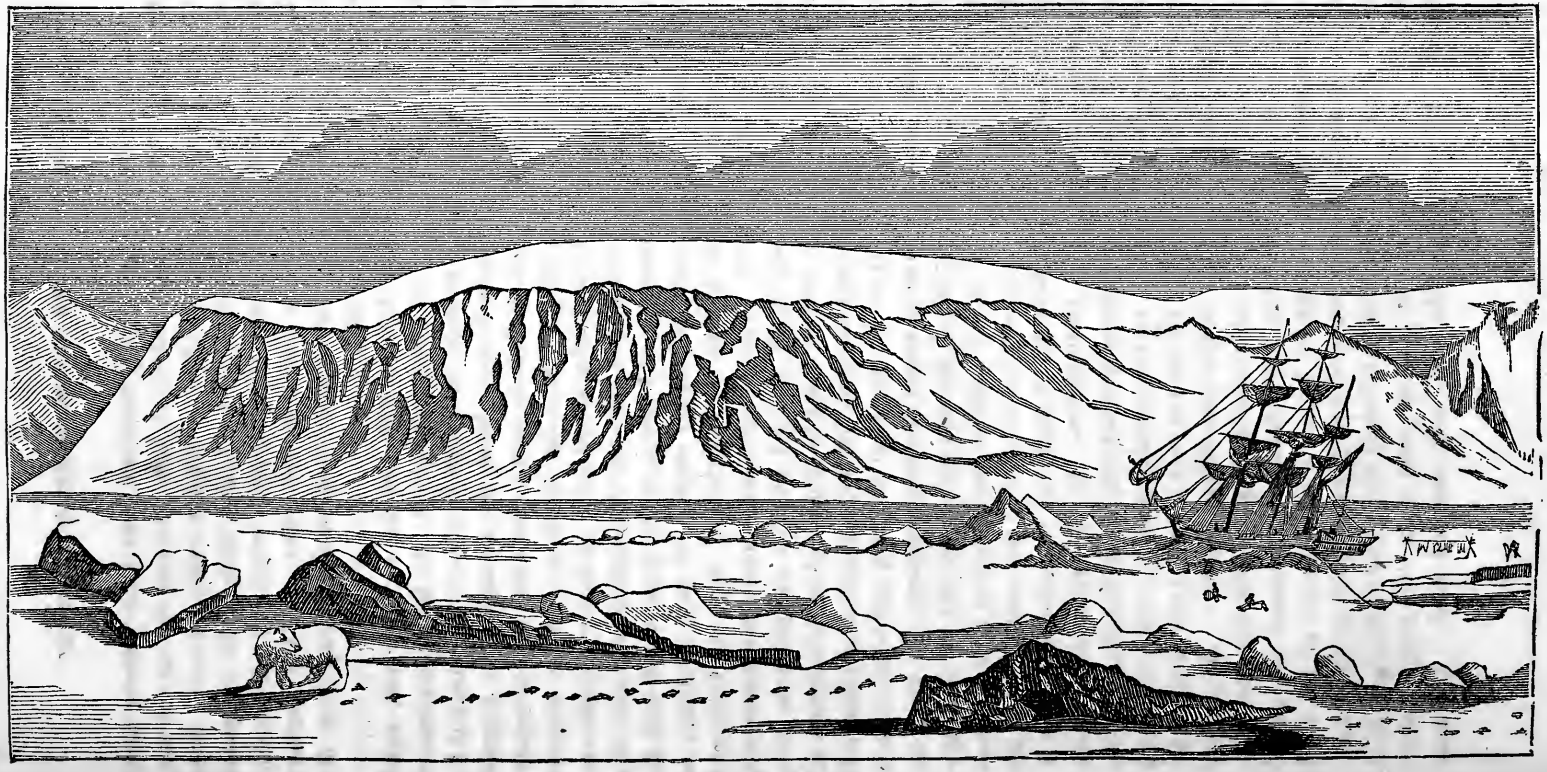
Owing to these various difficulties, the party was obliged to return to the ship sooner than was intended. The hardships endured by those who undertook these excursions, always caused sickness, more or less severe; indeed, nothing less than experience could convince me that the human constitution can support such trials as I have seen it subjected to in the high northern latitudes.

At the time to which reference is now made, it was constant day-light. The sun which had set, for the last time that season, on the 19th day of April, was now constantly above the horizon. Even at midnight, its altitude was not less than twelve degrees, while its meridian altitude was thirty-five degrees, which was the greatest elevation it attained, except in November and January, when it may have ascended two degrees higher. The apparent movement of the sun, as witnessed from this point, is in a circle, not much inclined towards the horizon, below which, during the continuance of the Arctic day, it never sets. Notwithstanding the continuous sunshine, the thermometer always indicated a temperature much below the freezing point, in the shade. During the first part of June, and even in the warmest days of July, the temperature was seldom more than forty degrees above zero.

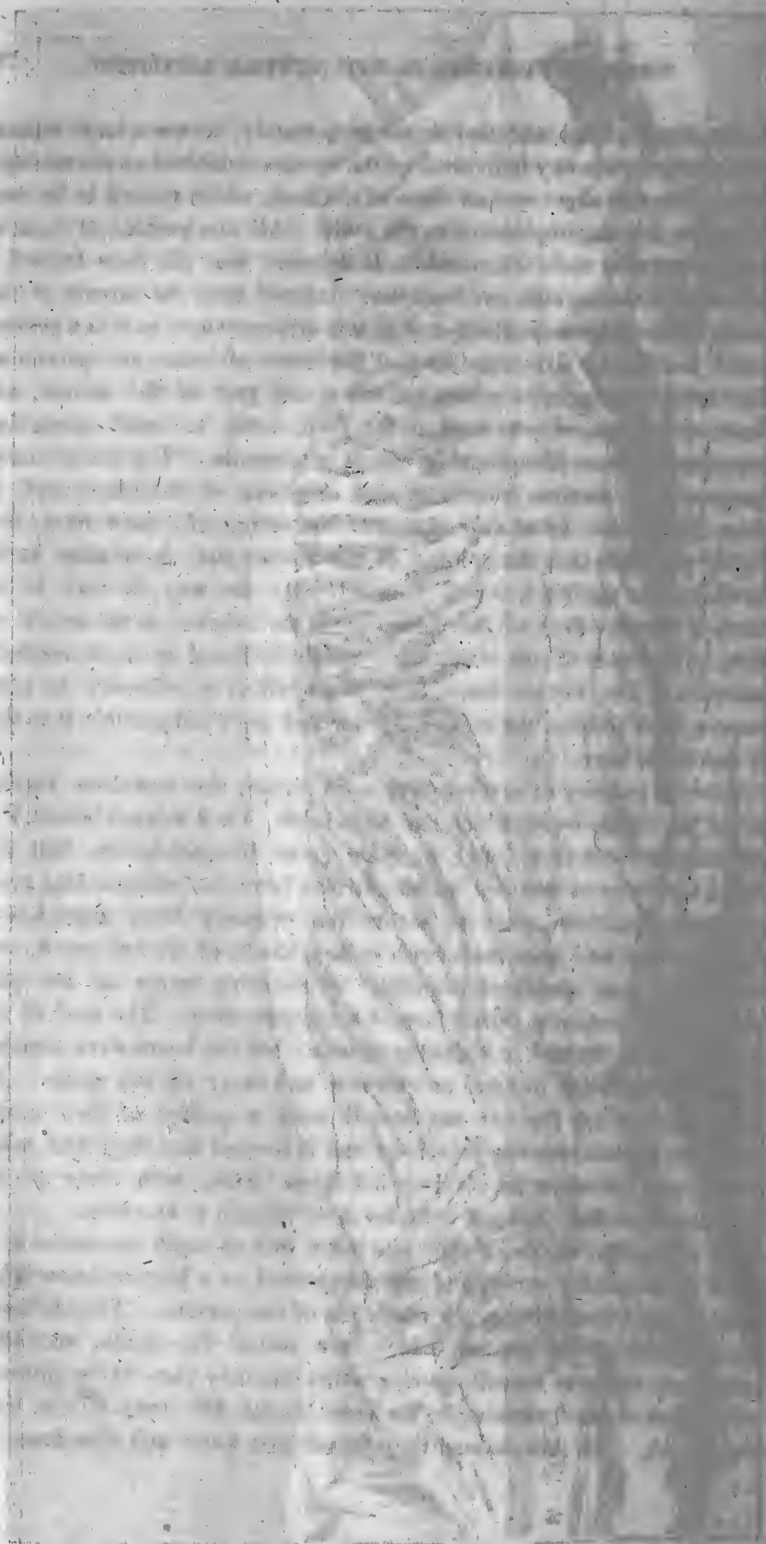
SLEDGE PARTY RETURNING.

Before the last-mentioned party returned from their journey across the channel, another sledge, drawn by men, was sent out on the same route which was taken by Dr. Kane in the preceding autumn. When the party with the dog-sledge returned, that sledge with its canine team and several men, was sent after the party which last left the ship. The dog-sledge detachment overtook the other near the southern extremity of the large glacier, which I mentioned as having been discoverd in the autumn preceding.

Near this locality, while the men were sleeping in their tent, which had been pitched on the ice, a large white bear, who had been attracted to the spot by curiosity, perhaps, or the smell of the provisions, put his head into the door of the tent, and saluted the inmates with a growl which awakened them and made them start to their feet very promptly, to receive their unexpected guest with due courtesy. As the sleepers were enclosed in their blanket-bags, and other dormitory appliances, it was some time before they could make any demonstrations, either of a friendly or a hostile character, and Bruin, in the meantime, forced his way inside of the tent, and deliberately smelled of each occupant, as ladies smell chickens in market, to ascertain if they are fresh and wholesome articles of food. The travellers were considerably annoyed, and, to say the truth, very much alarmed by this unseasonable visit, especially as no means of defence could be thought of in the exigency of the moment. Their rifle and shot-gun, the only weapons they possessed, had imprudently been left on the outside of the tent, and none of them had a knife large enough to be useful in this emergency. In these embarrassing circumstances, one of the men bethought him of the expedient of lighting a box of lucifer matches, and applying it to the nose of the bear. This offensive operation only made the intruder raise his head, and stare at the offender with a stern and vindictive aspect, as if to check his audacity and presumption. In the meantime, another member of the party remembered a boat-hook, which was stuck in the snow at the back of the tent, on the outside; and, in order to obtain the use of it, he cut a hole in the canvas with his pen-knife, and, to his great joy, found that the instrument was within his reach. He grasped it, drew it into the tent, and made a resolute punch with the spear-like weapon at the bear's countenance, which manœuvre caused the animal to retreat to the sledge, where he began to devour some of the dried seal's flesh, which had been provided for the subsistence of the travellers. The man with the boat-hook followed him, and with another punch drove him to the distance of several yards from the sledge, when another of the party seized the rifle, took aim and fired. The bear



DAVIS'S STRAIT.



was shot in the head, and died almost immediately. It was a large animal, much larger than any individual of the species exhibited at the menageries. The travellers cooked some of the flesh, which proved to be very unctuous, but not unpleasant to the taste. All who partook of it, however, were very sick afterwards. It appears that the *liver* formed a part of the mess which our travellers obtained from the carcass of this bear; their sickness is attributed to this circumstance, as it is a general belief among the Greenlanders that the livers of bears are poisonous. No Greenlander can be persuaded to eat this part of the animal, and those of our people who used it for food, even in small quantities, experienced some disagreeable effects afterwards. The usual consequences were nausea, vomiting, and eruptions of the skin; and, as these symptoms invariably followed the eating of bear's liver, it is highly probable that the opinion of the Esquimaux, in relation to its unwholesome qualities, is well founded. By the way, it may be remarked that the flesh of the polar bear is far inferior, as an article of diet, to the meat of the black bear, which is found in more southern latitudes. The former has a fishy taste, which is offensive to some palates, and besides, the meat is harder and more indigestible than that of the black bear.

After a journey of several days continuance, the travellers arrived at the provision depot, which had been made, (as I related before,) in the autumn; but they found, to their great disappointment, that this depot had been overhauled by burglarious bears, notwithstanding great precaution had been used to secure the property from depredation. An enclosure had been made with stones, blocks of ice and snow, and the whole was cemented together by throwing water on the pile, which being instantly frozen formed a compact mass. The roof of the enclosure was formed in a similar manner; but the bears were cunning and skillful enough to force an entrance and carry off the spoils. All the provisions left for our use was of such a quality as their ursine lordships contemptuously rejected; and it seemed that they had taken a malicious pleasure in playing indelicate tricks with some of the victuals which they did not consider good enough to be eaten.

At this point, the dog-sledge was laden with as much provisions as it could conveniently carry, and was despatched on a journey towards the north, with a travelling party consisting of two persons. They followed the direction of the glacier, which runs almost due north, and after some very toilsome travelling over rough ice, they came to the entrance of another channel running to the north, in lat. 80°, long. 67° w. from Greenwich. In this channel they found open water and abundance of

living animals, especially aquatic birds. On the eastern shore, there was was much ice, of a formation so rugged as to prevent them from continuing their journey, for more than ninety miles in a northerly direction. At this point, there is a precipitous cape, and beyond this all appearance of ice ceases. The channel is between thirty and forty miles wide, and the land on the west side appeared to be quite elevated; so much so that it was seen, at a very great distance, in a northerly direction, from the last point which this travelling party was able to reach. From what has been stated it will be perceived that the situation of this high land must be north of 82° latitude. A gale from the north, which blew for a long time, did not bring any ice down the channel. From this we may conclude that there must be a mass of open water beyond this point. Remains of Esquimaux inhabitants, consisting chiefly of an old sledge, were also found on the eastern coast of this channel.

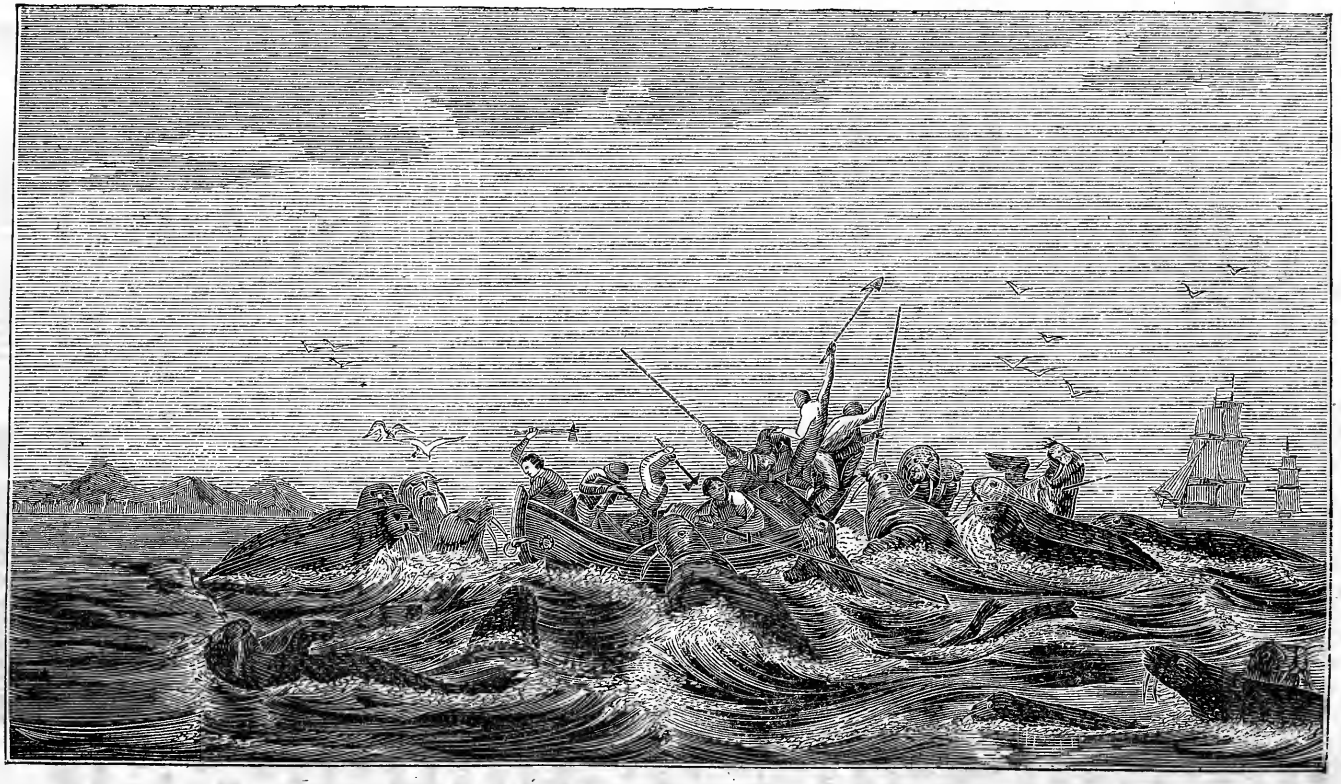
CHAPTER VII.

NUMBERS OF WALRUSES OR SEA-HORSES ARE DISCOVERED.—DESCRIPTION OF THE APPEARANCE, HABITS, AND PECULIARITIES OF THESE ANIMALS.—SUMMER SCENERY IN THE ARCTIC REGIONS.—VEGETATION.—ANIMAL LIFE.—ARCTIC BIRDS, BEARS, FOXES AND RABBITS.

In the channel spoken of at the close of the last chapter, vast numbers of walruses were discovered. As these animals have not been very accurately described by travelers and natural historians, I will here give the reader a description, which may not be found uninteresting. The walrus is much larger than an ox. Though its formation is similar to that of the seal, or sea-calf, and other amphibious animals—it is never found out of the water, except when reposing on the ice. The skin of the walrus is covered with short hair, like that of the seal; its mouth resembles that of the lion; the head is small in proportion to the size of the body, which is very bulky and unwieldy. The upper part of the face is very much like that of the human species; and the animal wears a kind of mustache, which gives him a military aspect, like that of a French officer. They have no external ears; but are provided with four feet. Long tusks project from the mouth, one on each side, and these are as good ivory as the teeth of the elephant. The female is often seen lying on floes or cakes of ice watching the gambols of her young brood, which are usually two in number. When fishermen approach, or any other object alarms her maternal sensibilities, she takes up her interesting offspring, one at a time, and pitches them into the sea; after which she herself plunges in, seizes her babes in her affectionate arms, and disappears under the ice, or water. The female of this species, as well as of many others, is more ferocious than the male, especially when she conceives it necessary to act in defense of her young. On such occasions, she is sometimes provoked to make an attack on the fishermen who approach her place of resort; she then tosses her cubs from her, and with all her force rushes against the side of the boat, as if with the design of crushing it by the collision. In combat, this animal is what some people would term "an ugly customer." It is impossible to kill one unless you can succeed in striking it on the forehead. At all other points they are nearly invul-

nerable. Walruses are more numerous on the western coast of Spitzbergen than in Baffin's Bay, Behring's Straits, or any other part of the Arctic seas with which I am acquainted. In fine weather, they resort in large numbers to large pieces of ice floating about the edges of the great marine glaciers. Hundreds of them are often seen in a herd, and many different herds may be in view at the same time. They appear to enjoy themselves very much, tumbling about on the ice and making the air resound with their bellowing, which much resembles that of bulls. When they fatigue themselves with these diversions, they betake themselves to repose; but these wary animals, before they resign themselves to slumber, always take the precaution of appointing a sentinel to arouse them on the approach of any danger. So universal is the observance of this precaution, amongst the species, that no sleeping herd, however small, is ever seen without one wakeful fellow in their midst, who stretches his long neck in the air to the full extent of the muscles, every half minute, and looks around him with a glance of anxious scrutiny. In case of any alarming appearances, the faithful sentinal begins by attending to his own safety; and, as these animals always lie huddled closely together, the motion of one is immediately communicated to the whole group, which instantly begins "to make tracks" toward the water. Having arrived at the edge, they pitch in head-foremost, sidewise, and in every imaginable posture—such is their hurry to escape from the object of their terror.

On some occasions, however, they show none of the timidity which is imputed to them in this description. In the year 1818, Captain F. W. Beechy, while on an expedition to the Arctic seas, had a furious assault made upon one of his boats by a herd of walruses, or sea-horses, as they are sometimes called. It required great activity and perseverance on the part of the boatmen to beat them off. They rose in great numbers about the boat, snorting with rage, and rushing on to meet their enemy with great intrepidity. They attempted to upset the boat by hooking their tusks to the gunwales, or by butting against the sides with their heads. It was with great difficulty that the men could prevent the boat from being capsized by these operations. Old whalers believe that these assaults, which are not of rare occurrence, are conducted and directed by some particular walrus of a daring and chivalric disposition, worthy to be the commander of such a warlike band. The attacks are managed with as much order and military tact, (to say the least) as many of those which were made by the combined troops of France and England, at Sebastopol. In the case, which we have just been speaking of, the herds were so numerous, and one de-



DESPERATE ATTACK OF WALRUSES ON THE ENGLISH BOAT.

tachment after another came on so rapidly, that the party who stood on the defensive had scarcely time to load a musket; and no other weapons except fire-arms could have the least effect on such hard-skinned assailants. The purser of the English boat fortunately had his gun loaded; and when the whole crew were nearly exhausted with the futile exercise of striking and punching at their assailants, he snatched up his piece, thrust the muzzle down the throat of the leader, and fired into his bowels. The wound proved mortal, and the captain of the marine corps fell back among his companions. The latter desisted from the attack to assemble round their dying chief, and offer him their condolence and assistance. They actually bore him off with their tusks and assiduously prevented him from sinking.

In the year 1608, one of these animals was taken alive to England, where it was exhibited to the king and court, but it died soon after its arrival.

While on the journey last spoken of we saw a great many bears; but as they were very shy, we succeeded in killing but two of them, viz., an old female and her cub. The meat was given to our dogs. This traveling party returned to the ship about the 1st of July. By this time the thawing season, or Arctic summer, had commenced. The water ran in large streams from the hills and formed pools on the surface of the frozen sea. These ponds were very great obstructions to the passage of the sleds; and, at several places, they were almost impassable. Snow-blindness was a great affliction and inconvenience to all our traveling parties, the disease being both troublesome and painful. The party which had separated from this one on the south side of the glacier had returned to the ship some time before, all of them so much blinded that they were scarcely able to find the way back.

As the season advanced, the appearance of the country began to undergo a change. The snow disappeared from the south side of those hills which were nearly perpendicular, showing the dark barren rock without any superincumbent soil or any appearance of vegetation. The white mantle of winter still overspread the more sloping declivities, and the almost horizontal shelves—so that the hills presented alternate horizontal stripes of white and dark brown, or gray.

At the bottom of the ravines were large pools of water, formed by the torrents of melted snow which descended from the mountains, with great power and velocity, leaping from rock to rock, and forming very brilliant cascades which fell into the capacious reservoirs below. Each cascade was attended by a wreath of mist or water-cloud, which in receiving the rays of the sun, assumed all the colors of the rainbow.

The lively motion and variegated colors of the objects, the thunder-like sound of the falling water and the rolling stones over which it flowed, formed a most striking contrast with the horrid gloom and stillness of the Arctic winter through which we had so lately passed. It was like a transition from death to life, and produced a feeling of buoyancy and exhiliration I cannot describe.

At some favored spots—the rocks which flanked or surrounded the cascades were covered with a luxuriant growth of moss, very green and beautiful, and occasionally a dwarfish willow was seen projecting from the clefts, in which some little mold had accumulated. The stem of these willows was seldom thicker than a man's little finger. We saw, besides, a few poppies; and a beautiful little flower which sprang up in some places from the thin soil formed on the surface of the rock. We observed that this flower made its appearance as soon as the snow disappeared from the ground, and its life must have been of short duration, for we never saw it in any place which had been freed from the snow long enough to become perfectly dry. Occasionally, likewise, we met with small bunches of scurvy grass (*cochlearia*), which much resembles the water-cress in appearance and character. It is an edible plant, and we sometimes obtained enough of it to make a salad—a very great delicacy to people in our situation, who had tasted no fresh vegetables for many months. In every place where there was any soil, something green appeared; and the process by which nature tries to produce soil in these stony, desolate regions, is truly wonderful. At first, on the naked rock the stone-moss begins to form—this is so closely connected with the stone on which it grows, that it appears to be a compound of mineral and vegetable substance—the dry, small, and almost invisible leaves appear, at a short distance, like red, green, yellow, or black spots; as these molder away, they are succeeded by a more dense and compact growth of green moss. After a considerable time this also decays, leaving a thin mold on the rocky surface; and this mold becomes thicker and more susceptible of vegetation every year. From this statement it must appear that vegetation is slowly but constantly advancing in these regions; and, be the cause what it will, it is obvious to me that the climate itself is gradually improving, and that the time must come when all this ground will be inhabitable. As more depth of soil is obtained, higher orders of plants and herbs will appear—birds visit the locality, and a deposit of manure makes still further improvement in the productive energy of the ground. In all places which have been frequented by birds or the Esquimaux, the vegetation is always most luxuriant, and very often in such localities the

earth is covered with large plots of grass. The Esquimaux leave traces of their presence at every place which they have visited. Ruins of their huts—circles of stones with which they fasten their summer tents to the ground—bones and skulls of the sea and land animals in which these people make their prey—and sometimes human skulls are found at the places where they once fixed their residence.

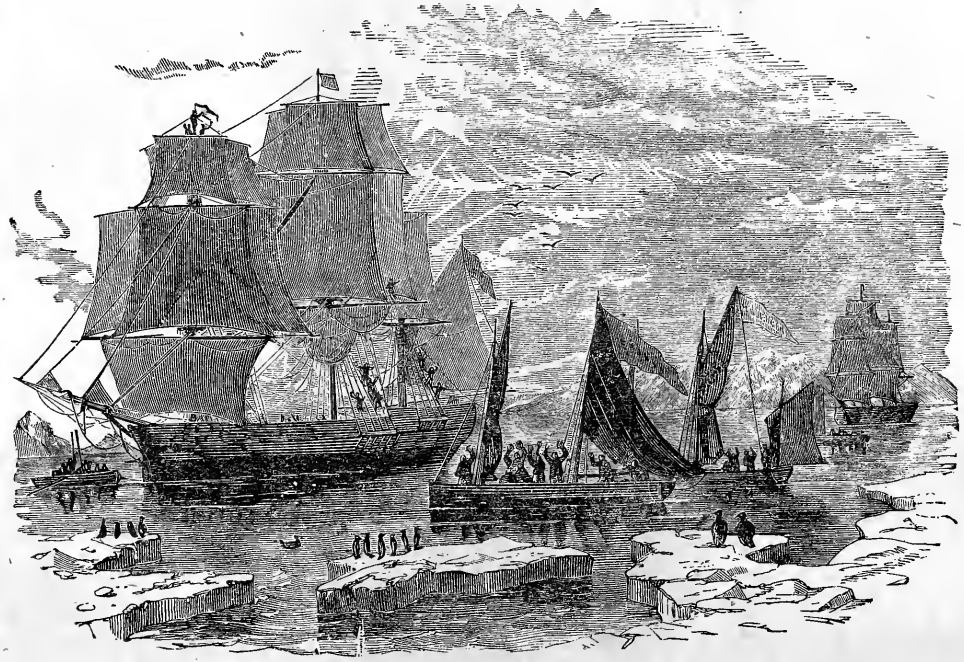
The advance of summer made a revival in the animal kingdom likewise. The little snow bird was the first feathered immigrant from more southern regions—snipes, ducks, geese, loons, and several species of gulls soon followed, for the purpose of depositing their eggs, which are easier protected here from predatory animals, than in the country where these fowls pass their winter. The charming little ptarmagan which passes the winter in this climate, now changed its plumage. The raven alone underwent no variation—for that "gentleman in black," who inhabits all climates, never changes his sable habiliments. This increase of animal life was not so much observed near the ship, as it was more to the south, where the water was open. Although it was now near the middle of July, the ship was surrounded with a belt of ice forty miles in breadth, which separated it from the open sea.

Foxes, which could often be seen and caught in winter, now became scarce. These animals are very different from the foxes of our own country—they are of two distinct varieties; one kind is white, and the other dark bluish gray. They are smaller than the foxes of southern latitudes; the blue ones, as they are called, have a very fine fur. They feed chiefly on birds, which they catch with great dexterity. Sometimes they follow the bear as jackalls do the lion—to pick up the remnants of the larger animal's banquets. During the winter the foxes thronged about our ship and made strenuous efforts to break open the store-house in which our provisions were deposited on one of the small islands, situated near our winter harbor. We caught numbers of them in stone traps; some of them were kept alive and domesticated on board, where they ran about the deck and became the pets of the sailors. They are easily tamed, and when permitted to range through the vessel they destroyed the rats and mice very effectively. In fact, no cat or terrier could perform this duty more faithfully.

The rabbit of this country differs greatly from the common American rabbit—being much larger, (some of them weighing more than ten pounds,) and they are perfectly white. We saw no walrus; they are very scarce, or perhaps there are none of them on the eastern coast of Baffin's Bay. We saw some foot-marks there, which were either those of a wolf or of a very large dog. Several reindeer were shot.

These animals are very scarce and very shy in this northern country. The Esquimaux never catch any here, as they cannot approach them near enough for the purpose. The flesh of these deer, and that of the seal, was very useful to the ship's company as a remedy for the scurvy, some slight cases of which appeared among us in the spring months.

THREE GRAVES DISCOVERED BY CAPT. PENNY.



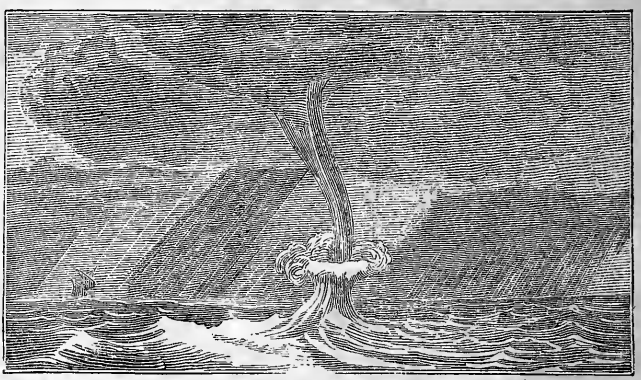
LEAVING ST. JOHNS.

CHAPTER VIII.

TERRIFIC WATER SPOUT.—A THRILLING SCENE.—LARGE FIRE BALL PRECIPITATED INTO THE SEA.—SEALS, AND THEIR MODE OF HIDING.—WEARISOME JOURNEY ACROSS THE ICE.—HOW THE ESQUIMAUX HUNT SEALS.—WATER TORRENTS.—WE PREPARE TO SPEND ANOTHER WINTER IN OUR SHIP, WITHOUT FIRES AT NIGHT.—GREAT SUFFERING.—FAILURE OF DR. KANE'S PARTY TO REACH BEECHY ISLAND.

WHILE we were off Clermont Tonnere, we had a narrow escape from a water-spout of more than ordinary size. It approached us in a very awful and imposing manner, accompanied by heavy rain, thunder and lightning. The obscurity of the atmosphere prevented us from seeing the dangerous marine prodigy until it was very near the ship. As soon as we were within the sphere of its influence, a gust of wind struck the ship so suddenly that she was almost thrown on her beam-ends. All hands were immediately engaged in taking in the sails; but before this could be done, some of the canvass, especially the fore top-sail, was split into shreds. The wind blew with astonishing violence, momentarily changing its direction, as if it were sweeping around in short spirals. The rain, which fell in torrents, was precipitated in curves, with intervals of cessation. Amidst this thick shower, the water-spout was discovered. It extended, in a tapering form, from a dense stratum of cloud to within thirty feet of the water, where it was hid by the foam of the sea, which was whirled upward with a tremendous gyration. These water-spouts are of common occurrence in the northern seas. In 1826, a similar spectacle was witnessed by Captain Beechy's exploring party, which was then detained by the ice in the Arctic ocean. Captain Beechy, in his report of this phenomenon, says that just before the water-spout appeared, a large fire-ball was precipitated into the sea. One of his boats was so completely enveloped in lightning that Lieutenant Belcher thought it advisable to get rid of the anchor by hanging it some fathoms under the water, and to put the seamen's muskets under a cover. From the account given by their officers, who happened to be at some distance from the ship at the time of the occurrence, it appears that the column of the water-spout first descended in a spiral form, until it met the column ascending from the sea. A second col-

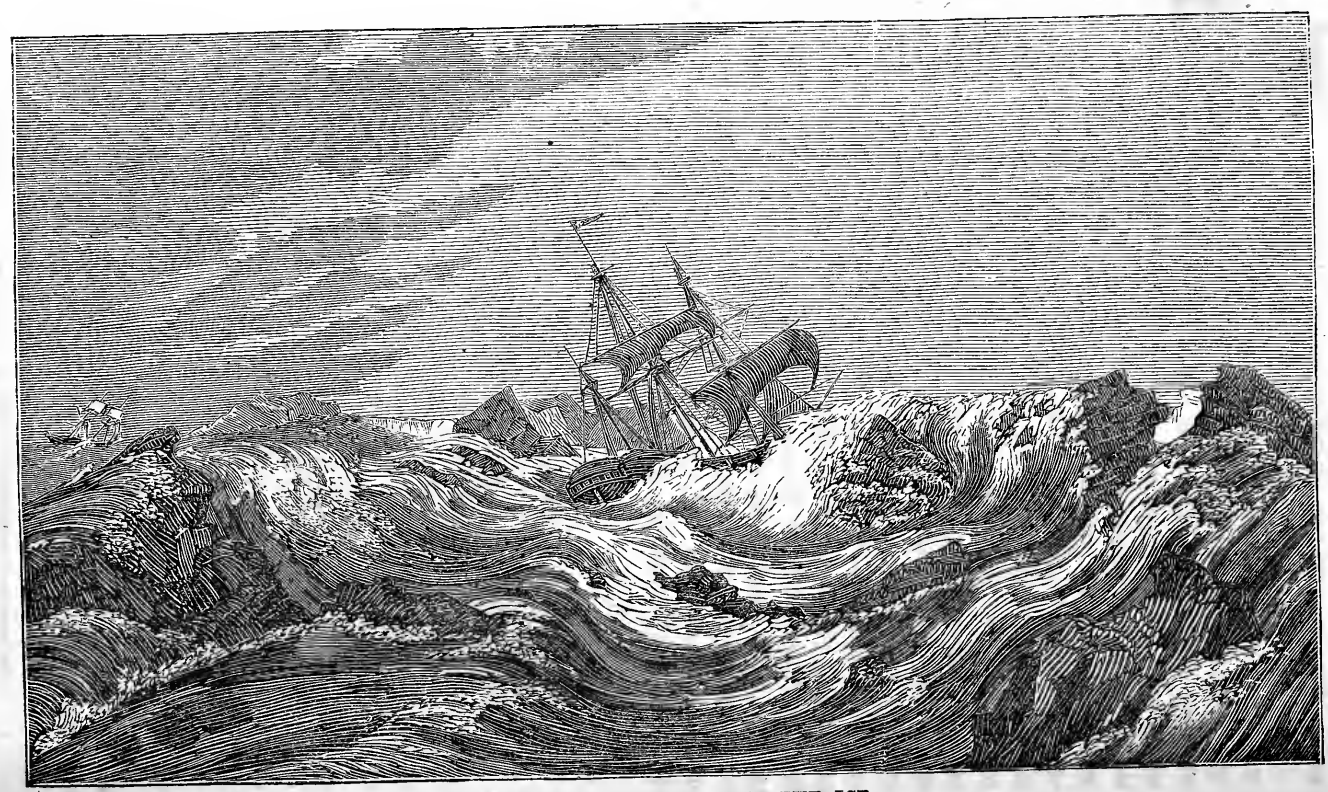
umn, and a third, were afterward formed at a short distance from the first; and finally, these all united in one large column. This again separated into three small spirals, and then dispersed.



WATER-SPOUT.

In our wearisome journey across the ice, we had little time to hunt for animals. A considerable number of seals was shot during the spring and summer. They lie scattered about on the ice during these seasons; but they always take care to be near an "air hole," so that they may creep in and make their escape as soon as any living thing approaches them, or the slightest noise is heard. The hunter must, therefore, be very much on the alert, if he hopes to come within shooting distance before they retire from his observation. The Esquimaux creep along the ice, screened from the sight of the seals by an interposing hummock, and by this means approach near enough to spear or harpoon the animals. But the hunter employed on board of our ship made use of a small sledge, on which was a square screen of white cotton cloth, measuring about four feet each way, behind which he concealed himself, pushing the sled along before him until he came near enough to the seals to obtain a good shot. In the middle of the screen was a small hole through which the rifle was pointed and fired at the unsuspecting animals, who were not sufficiently acquainted with the tricks of human rascality to shield themselves from the unseen danger. When the seal is not killed on the spot, he usually contrives to get into the water and effect his retreat, before the hunter can overtake him.

Up to the middle of July the ice continued unbroken for many miles around our vessel, and it became doubtful whether it would be sufficiently broken up during that season to liberate the ship from her gelid



EXPEDITION DRIVEN INTO THE ICE.

fetters. Every evening, when the weather was clear and calm, a thin coat of new ice formed on the surface of the fresh-water pools which surmounted the old ice-fields. In fact, the season showed all the indications of more than the usual frigidity.

Our provisions were sufficient, perhaps, to last through another winter, but they were not of a kind or quality to secure us from the attacks of scurvy, if we should be detained in that region for a great length of time. Dr. Kane concluded, therefore, to attempt a boat journey to Beechy Island, in Lancaster Sound, where the head-quarters of the English Arctic squadron were established. The party started about the middle of July with a whale-boat, which had to be transported over the ice for about thirty miles before it could be launched in the open sea. A large field of ice, which extended across Baffin's Bay, from Jones' Sound to Whale Sound, offered an insuperable barrier to our progress. This ice was broken up into pieces so small that the boat could not be transported over them, and they were too closely packed together to permit the boat to push through them. In this mortifying state of affairs, all that we could do was to surrender to necessity, and return to the ship. This, in fact, we did after we had remained at this place for about a week, hoping for some favorable change.

At the end of the first week in August, a water torrent, which had made a small channel in the harbor, swept away the broken ice to the distance of several hundreds of yards from the ship, and the rise and fall of the tides broke it up along the shore. As the ship was not imbedded, she was soon afloat, and by blasting the ice around her we contrived to open a considerable space—outside of which, however, the icy barrier remained unbroken. In order to make further attempts at extrication, we tried the same expedients which we had used formerly when coming up the channel. But to saw a track for a ship through thirty miles of ice, and to warp her along that track afterward, are undertakings which might have made Hercules himself shrug his shoulders and shake his head with apprehensions of a failure. As I have stated before, the belt of ice which surrounded the ship was thirty miles in breadth, and new ice was forming every day. After a day spent in great exertion by the whole ship's company, crew and officers, scarcely had we advanced so much as a ship's length. It was soon evident that open water could not be gained within the year, if our progress were no greater than this. However, the work was continued, until nature herself peremptorily forbade us to proceed. This happened about the middle of August, when the new ice, which had become strong enough to bear the weight of a man, connected all the broken pieces together

so firmly that it was not possible to move them out of the way or force a passage between them. The ship was therefore presumed to be fast for another winter, and preparations were made for spending it as comfortably as our much reduced means would permit. The cabin was enlarged, so that the fore part afforded accommodations for the men, and the cooking stove was placed in the new apartment aft. We had but a small quantity of coal left, and so all the spars which could be spared, and all the planks and timber which could be taken from the ship without making her unseaworthy, were cut up for winter fuel. Still there was not a sufficiency of burning material to enable us to keep up fires constantly, and the ship's company had to dispense with them during many of the nights. In consequence of this privation the temperature in the cabin was generally under 40°, and the cold was much greater near the floor, as the heat rapidly ascends.

The Esquimaux savages, who had not visited our ship since May now returned, as the new ice had become strong enough to bear them. They exhibited a more unfriendly disposition at this time than they did on their former visit. Several articles were stolen by them; among other things a buffalo-skin, which one of the party carried off with scarcely any attempt at concealment. A boat, which had been left on the shore, at some distance from the ship, was partially broken up by the thievish scoundrels, and the oars were taken away. Probably they were encouraged to commit these trespasses by the belief that we were tied up, like the bear to the stake, without any available means of defense.

CHAPTER IX.

TROUBLES AND DISAPPOINTMENTS.—ANOTHER WINTER SETS IN.—SCARCITY OF FUEL.—TWO BEARS VISIT OUR SHIP.—A BATTLE.—SEVERE SUFFERING AND SICKNESS.—ESQUIMAUX ARCHITECTURE, &C.—THEIR SLEEPING APPARATUS.

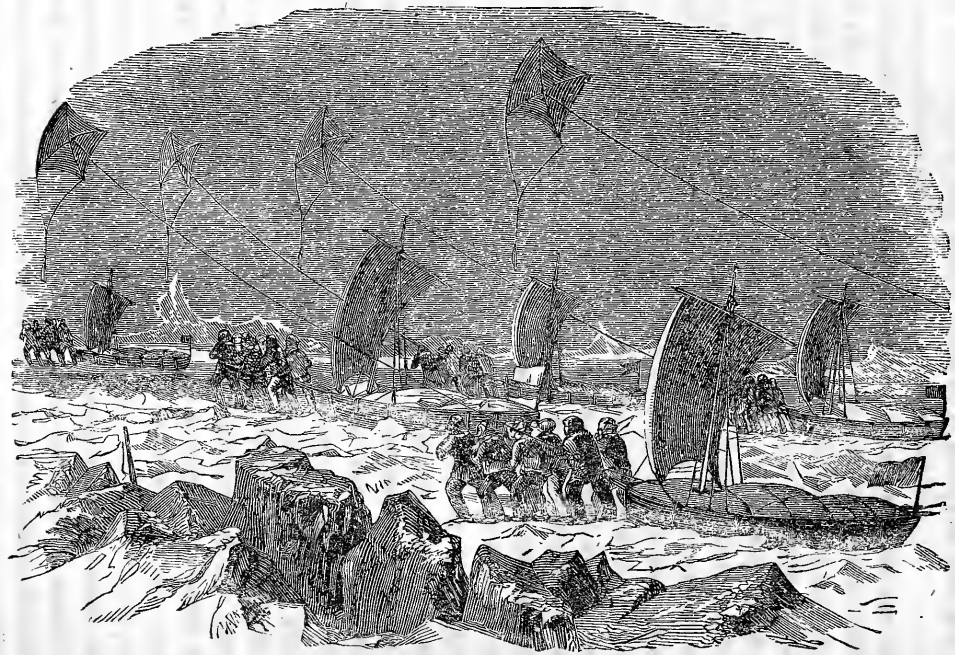
FROM the time of the return of Dr. Kane and his boat party from their ineffectual attempt to reach Beechy Island, (the head-quarters of the English expedition,) which was on the 6th of August, the anxious thoughts and hopes of all were directed to the breaking up of the ice, which we expected to take place. The season had effected a good deal toward bringing about this much-desired event. The frozen masses in the middle of the Sound, and indeed those outside of the Bay, were in motion. The ice in closer proximity to the vessel was very rotten, especially in those spots where the coal ashes had been thrown, the black surface absorbing more heat from the rays of the sun. Icebergs, moving in stately march, were seen in the seaward horizon; and even streaks of open water could be discovered sparkling in the sunshine. Dr. Kane had approached with his boat within five miles of the open water, by means of a "lead," or open channel among the ice, which extended along the shore.

When the water streams had partly opened a passage for the ship, as mentioned on a preceding page, she was warped, close in shore, around the islands which lay to the westward, and along the coast which extended toward the north of the harbor. In this way, with immense labor and difficulty, we proceeded about a mile—still, for five miles at least, an almost unbroken sheet of ice was interposed between the ship and the open water. The last days of August found the avenue, or "lead" of water, in the neighborhood of the ship, choked with ice. Nevertheless, the new ice, which formed in rather strong cakes every night, was not yet solid enough to last through the winter. But very soon this state of things underwent a change. Before the end of August the ice would bear a heavy weight, and would have almost borne a wagon and team of horses in those places where it had formed for several nights in succession and remained unbroken through the following days.

During this period of suspense, the hopes of the party had depended on the probability that a heavy gale of wind and the consequent commotion of the sea would break up the icy inclosure; and you may imagine with what interest every change in the weather was observed. About a week after the solidification of the water was complete, a heavy gale *did* come on; but it came too late to do us any good. Had this gale visited us one week sooner, it might have realized our hopes, by releasing us from the hideous bondage in which it was now our evident doom to be confined for another long period in cold and darkness.

All the signs of approaching winter were now visible. The summits of the loftiest hills reflected the pale rays of the setting sun at two o'clock in the afternoon; the horizon opposite the sun was draperied with a dark purple. The crepusculum above the declining luminary was variegated with tints suggestive of cold; but still beautiful, displaying a coronal of splendid violet and all the prismatic colors. The shadow of the icebergs became of a dark greenish color and a snowy shroud was spread over the shelves and ridges of rock and the whole landscape. The advance of winter was regarded now with a feeling of apprehension and more unpleasant forebodings than we had experienced before; because we were but indifferently provided with means and appliances of warmth and comfort. However, we continued to make every preparation our circumstances permitted. Fuel was the chief object of our solicitude. The coal was soon exhausted. All the loose spars, planks, and timber about the ship were cut up for firewood, and this stock was likewise consumed in the early part of the winter. Stern necessity then compelled us to make depredations on the ship itself; we cut away the bulwarks, the monkey-rail, many of the strengthening beams, the sheathing of the deck, and all the wood that could be spared. All this was done under the directions of our able and indefatigable carpenter, who was constantly engaged in the most energetic efforts to obtain fuel for the winter,—notwithstanding the state of his health unfitted him in a measure for these tasks, the performance of which required much exposure and hardship.

As our stock of fuel would allow us to keep but one fire, it was necessary that the whole ship's company should live in the small cabin, to the length of which about twelve feet had been added. In this apartment our cooking and all the other domestic operations of the ship were performed. The temperature was seldom so high that water would not freeze in some part of the room, and it often froze within ten feet of the stove. One of our greatest difficulties was that of keeping the



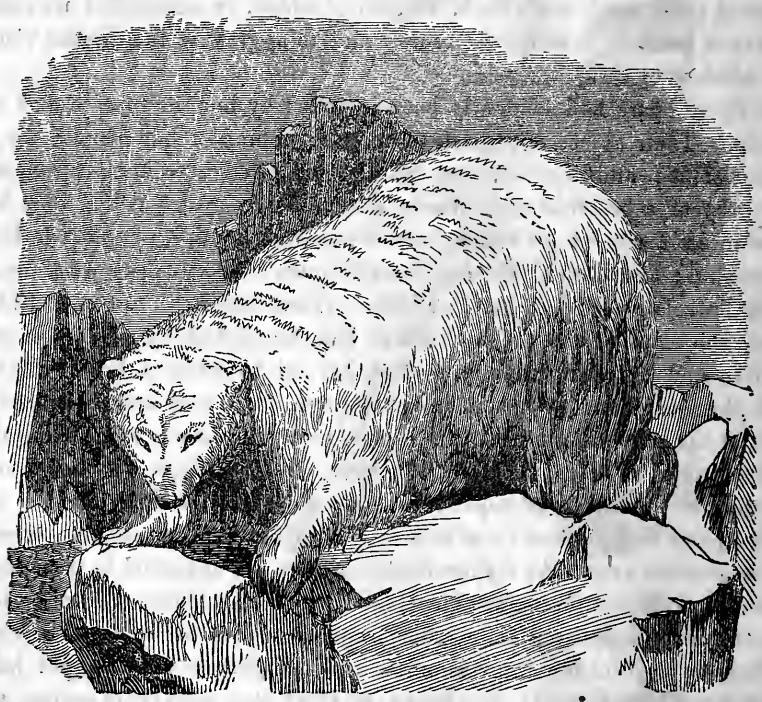
ARCTIC SNOW STORM.

mattresses dry, as the condensation of moisture on the sides and in the bottoms of the bunks produced a constant dampness among the bedding. The scurvy, in a severe and dangerous form, prevailed among our people. All of the company, except four or five, were disabled by this disease, at one time or another, during the winter; and the greater number of them were sick with it almost without intermission.

About the end of October, two bears, an old she-one and her cub, were killed very near the ship; and although at some former periods we had rejected the flesh of the white bear as unsavory and unwholesome food, we were now glad to obtain a supply of it, as fresh meat of any kind had become quite a rarity. These bears afforded us about a thousand pounds of meat of an antiscorbutic quality; whereas our only animal food before we succeeded in killing these creatures, were salted pork, beef, seal's flesh, &c., all of which, on account of its saline nature, tends to produce the scurvy and to aggravate the disease where it already exists.

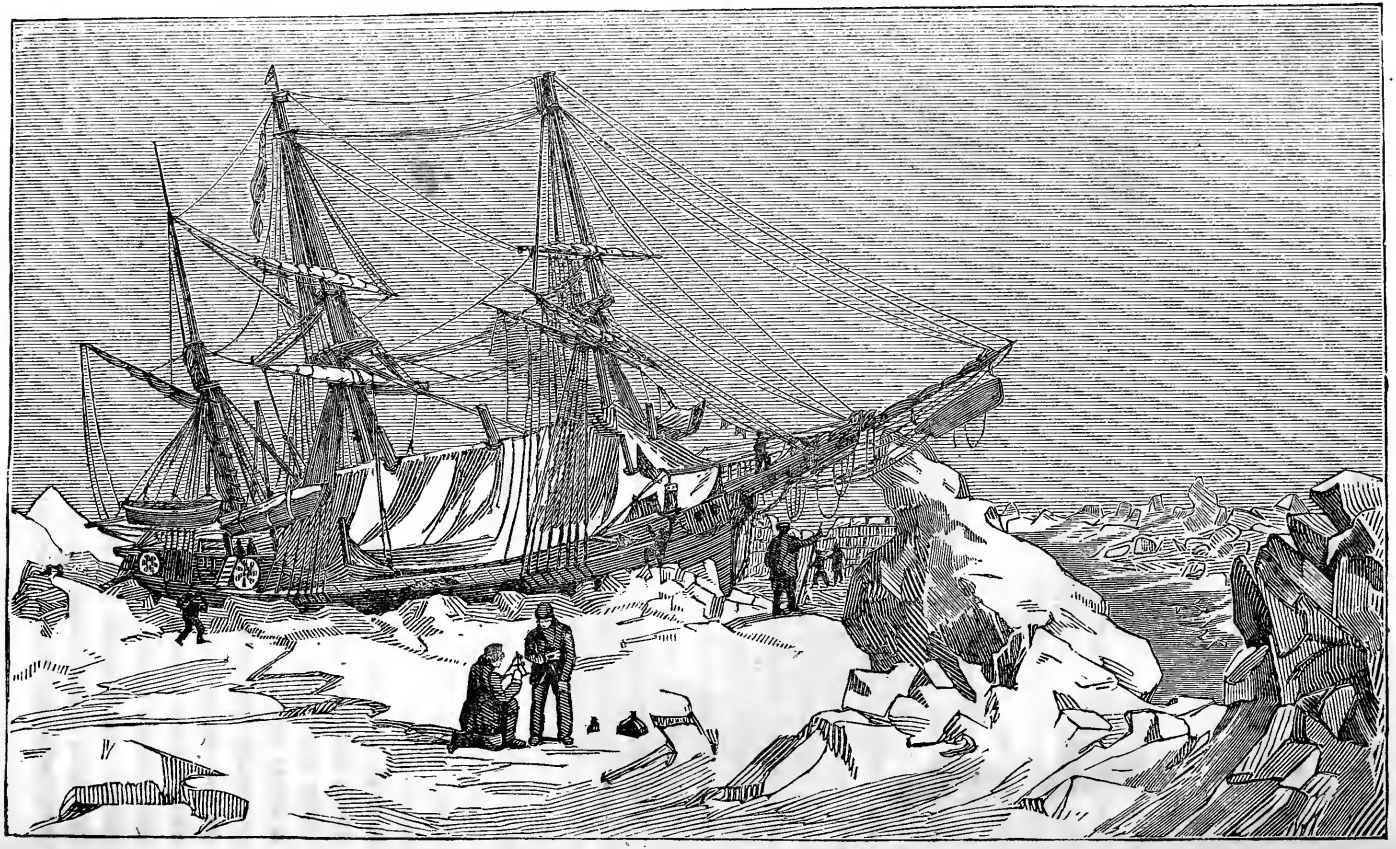
These bears had evidently been impelled by hunger to approach our ship. Their object appeared to be the robbing of our depository of provisions; and in this enterprise they exhibited a boldness which was worthy of a better cause. When they were first discovered, they had mounted a pile of provision barrels situated about thirty yards from the ship; and the old she-one backed down from the heap with one of the barrels grasped in her fore legs. When she had descended to the ice, she emptied out the contents of the barrel, and by significant gestures and her own example, invited her cub to make a hearty repast. In the mean time, all the men and dogs on board had been mustered to repel the robbers, and the dogs commenced the attack with admirable resolution. The old bear finding that she must fight for her dinner before she would be permitted to enjoy it, seized the large dogs in her fore paws and pitched them to a considerable distance, apparently with the greatest ease. As for her biped enemies, she appeared to treat them with supreme contempt, as objects too insignificant to deserve her notice; and even the repeated volleys discharged from our fire-arms for a while made no perceptible impression on this haughty and heroic old lady. After a while, however, she began to think that something serious was to be apprehended even from us. One of our shots badly wounded her; but she was not yet disabled, and she began to beat a retreat in good order. But her flight was retarded by the inability of her cub to keep pace with her, one of its legs having been broken by a pistol ball from a Colt's revolver, fired by Dr. Kane. Two well-trained Esquimaux dogs started in pursuit of the retreating animals, and annoyed

the old one on both sides. One dog would assail her on the right, and when she turned that way to defend herself, the other would make his assault on the left; and so they kept up the battle, assailing the retreating party on each flank alternately, and with such good generalship, that the bear seemed to have the worst of the engagement and the dogs to require no aid from their human auxiliaries. Nevertheless one of our men leveled his musket at the unfortunate brute, and the bullet inflicted a wound which made her perfectly helpless, so that she was immediately dispatched by the combined forces of men and dogs. This we regarded as a more signal and complete victory than that which was obtained over the *Russian* bear by the combined forces of France and England.



POLAR BEAR.

The winter, at the very commencement, was unusually cold, even for that climate. In November and December, the temperature was often from 50° to 60° below zero. Snow was much more abundant than it was in the first winter of our icy captivity. Cold gales of wind were also



POSITION OF THE BRIG "ADVANCE."

very frequent. The Esquimaux suffered a good deal from the severity of the weather. As early as November they began to emigrate to the *north;* this to the uninitiated will seem to be an unaccountable movement; but by way of explanation, I may state that the freezing begins southwardly. About 77° latitude, strong currents and the absence of "pack-ice" keeps the water longer open; and for hunting the walrus, these savages find that the edge of the ice is the most favorable locality.

There are, between latitudes 76° and 78° 20′, about ten little Esquimaux villages, each containing from two to five huts, but they are not all inhabited at the same time. These huts are most commonly built of stone, and they are always situated near the water. They have a dome-like shape; the diameter of the interior being about eight feet and the height about five feet. The roofs likewise are made of stone, and in the construction of them the Esquimaux show a peculiar art. Sometimes large whalebones are used for timber or rafters to support the stone roof. All unnecessary holes and crevices in these dwellings are carefully stopped up with moss; and in winter the whole building is covered with a thick layer of snow. The way in which they put this on is somewhat artificial. With a sort of a hatchet made of the tusk of a walrus, the Esquimaux architect cuts out blocks of snow about a foot square from places where this gelid material has been drifted in piles or ridges by the wind. These blocks are used for tiling and stuccoing their dwellings; and being very neatly put on, they give the building somewhat the appearance of white marble, besides making it more air-tight and comfortable.

A long tunnel, built of the same materials as the hut, forms the entrance. This tunnel, or vestibule, is just wide and high enough for a man to creep through; and the floor of the hut is elevated about one foot above the floor of the tunnel, leaving a small aperture through which the Esquimaux enters his habitation, the passage being almost as difficult as Hans Spiegler (in German story) found the entrance to Paradise. The hole or portal is never more than a foot high, and about as broad as the master of the mansion's shoulders; so that if any larger individual were to attempt to follow him, he would probably be stuck fast in the gateway. At three sides of the hut (the entrance being on the fourth side), there are elevated platforms, (or bunks, as the sailors would call them,) which do the duty of bedsteads, beneath which provisions, boots, hunting implements, and all sorts of lumber are stowed away. The platforms, bedsteads, or bunks (or whatever title you may choose to give them), are heaped with dried moss and grass or hay

—which makes a warm and luxurious couch. It is a custom among these people to go to bed with their boots on, though the same trick in civilized countries is regarded as symptomatic of an advanced stage of intoxication. The Esquimaux likewise wear their mittens in bed; and as both boots and mittens are pretty well stuffed with moss or dried hay, the hands and feet of the sleeper are well protected from the attacks of Jack Frost. The sleeping bunks occupy so much space in the interior of the hut, that little more than a square yard is left clear of the incumbrance, and in this small vacancy all the domestic operations of the family must be performed. Their mossy couches are covered with sheets or blankets made of seal-skins or bear-skins, and the walls of the hut are tapestried with the same articles. These skins in the summer time are removed from the huts and used for covering tents, in which these savages reside during the warmer season. Across the top of the hut several poles are extended, on which the skins are stretched to be dried in the process of preparing them for use.

CHAPTER X.

ARCTIC SPORTSMANSHIP.—FREQUENT VISITS OF THE ESQUIMAUX.—LIFE IN THE ESQUIMAUX HUTS.—MODES OF COOKING, COOKING UTENSILS, ETC.—OCCUPATIONS OF MEN, WOMEN, AND CHILDREN.—LAZINESS AND GLUTTONY OF THE ESQUIMAUX.—THEIR HUNTING EXCURSIONS: DIFFICULTIES AND DANGERS THEREOF.—INTERESTING ANECDOTE OF TWO YOUNG ESQUIMAUX HUNTERS.

A FEW ptarmagan and rabbits were shot, while we had sufficient daylight to answer the purpose of hunting. This duty devolved chiefly on Mr. Petersen, our Danish interpreter, and Hans, the Esquimaux boy, whom we had shipped on the south coast of Greenland. They were both good marksmen and were very fond of the sport, in spite of all the inconveniences which attended it in that region. The flesh of the animals which they "bagged" was eaten raw; and even in that state, it was found much more wholesome than the salt provisions to which we had been confined, and which had been the means of introducing the scurvy among our people. As soon as this fresh meat was obtained, the invalids on board began to recover.

The Esquimaux savages now began to honor us with repeated visits. They brought with them some fresh walrus meat, and bartered it for knives and other small articles of merchandise with which we were able to supply them. We sent Hans and one of our men with the dog-sledge to one of the nearest settlements of our savage neighbors; they carried with them some articles of traffic for which we wished to obtain more fresh provisions in exchange. This mission proved very successful, and we obtained thereby an abundance of wholesome victuals, the effect of which on our sick people was wonderful. In less than a month after the arrival of these supplies all the invalids were much better, and some of them were soon restored to perfect health.

Mr. Petersen, after his return to the ship, furnished us with some other particulars concerning the Esquimaux mode of living, which may be interesting to the reader. During the dark season, their huts are very well lighted by means of two large lamps, which are placed opposite the entrance on the edge of the platforms or sleeping bunks described in the preceding chapter. These lamps are made of soft stone

and are nearly in the form of a half moon; the hollow part inside is about an inch deep and twelve or fifteen inches long, and this is filled with blubber or oil, the wick being of dried moss, which is first rolled out in the hands to a string-like shape. Over each lamp hangs a pot of an oblong shape about three inches deep, which is likewise made of stone; it is suspended from the roof, and is used for melting snow for drinking water, and also for cooking the meat, this being the best and only contrivance they have for that purpose. Around these lamps stand the crockery-ware or table equipments, consisting of two or three little round vessels made of seal-skin stretched over a framework of bone (which serve them in lieu of cups and saucers), and certain substitutes for plates which are made of the shoulder bladebone of the walrus. They have a kind of forks also, which are nothing more than pieces of bone pointed at one end. Sometimes they use metallic knives obtained from Europeans; but if they have none of these, knives rudely constructed of bone are made to answer the purpose. Near the roof, above the lamps, is a small frame composed of transverse pieces of wood or bone, resembling our unglazed window-sash, which lies in a horizontal position, and is used for drying the clothing.

By the side of each lamp, there generally sits an Esquimaux woman, the mother of a family, (two families usually occupy each hut,) who keeps the lamp trimmed and attends to the boiling of the meat or the snow-melting. The snow which is intended for conversion to drinking water is cut in square cakes of about one foot in size, and in this form is piled up in the hut ready for use.

Within the small interior of one of these huts from eight to ten people usually reside, and sometimes a larger number. The animal heat of the occupants, with the radiation of two or three large lamps, raises the temperature, even in the coldest days of winter, to 90° or 100° above zero. In consequence of this excess of warmth, the inmates strip themselves quite naked, and sit or lie in crowds on the bed-place or bunk, avoiding the floor, where the cold air always settles. Here the women are seen attending to their domestic avocations; the men, when at home, are either sleeping or eating, and the children are waddling about and eating likewise, whenever they have an opportunity. The whole forms a group which an admirer of unadorned human nature might contemplate with pleasure; but to most spectators who have seen a better style of living and more favorable specimens of the human race, the sight is any thing but agreeable. In one of these huts you have an opportunity to inspect the anatomical structure of these people to the best advantage, as their personal charms are not concealed under

ESQUIMAUX WOMEN.

any kind of drapery. The huge square head, the muscular and almost herculean arms, and the well-developed breast of the Esquimaux, form a striking contrast with the thin, short legs and small feet. The upper part of the figure is that of a giant: the lower part is that of a child. Although I am not of a very facetious temper, I never could look at these undraperied figures without laughing. Their appearance reminded me of those incongruous pictures which are seen in the comic almanacs. The disproportionate form of the Esquimaux has been observed by former travelers, and it has been accounted for by referring to the circumstance that the men of this tribe pass a great part of their time in their boats or kaiaks, in which their upper limbs are exercised by rowing, while their legs remain perfectly inactive. But this explanation will not answer the purpose. The Esquimaux of the northern coast of Greenland, in whom this personal deformity is most conspicuous, have no kaiaks, and never learn to handle the oar. They exercise their legs I believe nearly as much as their arms; for when traveling they run as much behind the sledge as they ride in it; and, what is still more to the purpose, the children have the same corporal peculiarity before they begin to exercise either their legs or their arms. I will say nothing about the corresponding formation of the *women*, as delicacy forbids to touch on that branch of the subject; but it appears to me that the oddity of shape observed among these people is hereditary and a peculiarity of the tribe.

The occupations of the women, while they are in the hut, or tent, are not much varied; the females attend to the lamps, (as observed before,) they do the cooking, sew the men's clothing, and attend to the children. Their maternal affections appear to be very strong; but no signs of attachment or endearment among grown people—husbands and wives, for instance—are ever witnessed by strangers. Perhaps the men, like French and Italian gentlemen, are ashamed to be seen in the act of kissing their own wives; but we never could discover that they were at all acquainted with the art of kissing, or that any practiced it in any circumstances whatever. My young readers of both sexes may find it difficult to believe this statement, but it is nevertheless true to the letter.

The children assist their mother in the preparation of skins for wearing apparel; the boys make fox-traps, which they set along the beach. The flesh of the fox is considered as a delicate article of food, and the skin of this animal forms an important part of the winter clothing.

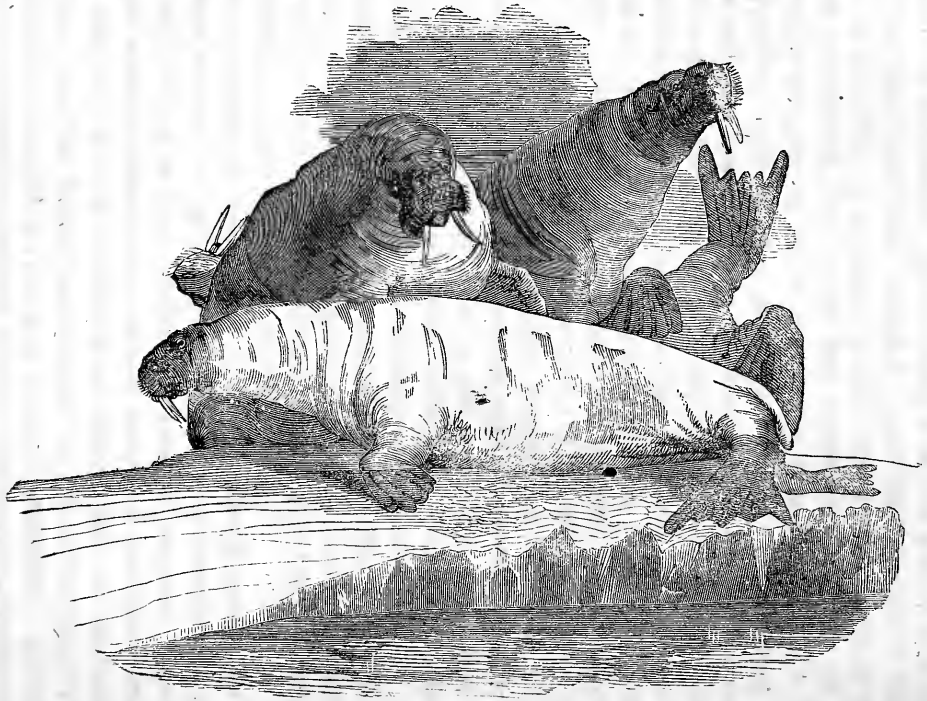
The men are excessively addicted to loaferism and gluttony. They take no more out-door exercise than is absolutely necessary to supply

their families with food and clothing, and the greater part of their time is spent in their huts, where their only employment is eating, and their only recreation is sleeping. The quantity of meat which an Esquimaux man can consume is astonishing. Eight or ten pounds at a meal is supposed to be a moderate allowance. A whole seal is brought into a hut: it is speedily skinned and stripped of its blubber—the men, in the meanwhile, devouring the raw flesh without intermission. The women, all this time, are getting some portions of the carcass ready for the pot and boiling it, to furnish out the regular meal, as the gentlemen of the household consider the raw flesh which they have been swallowing in huge gobbets as a mere preliminary snack or luncheon. When the regular meal is cooked, they fall to with as much animation as if they had not broken their fast for a fortnight. They never discontinue eating as long as a morsel remains to be swallowed.

Between meals they often solace themselves with a kind of sandwich, made by inclosing a slice of blubber between two pieces of seal's flesh, cut from a lump of meat which has been frozen. Among their greatest dainties, the livers of the seal and walrus take precedence.

When the men go on a hunting expedition, they take a sufficiency of meat and blubber with them to last as long as they expect to be absent from home. They are seldom away more than forty-eight hours at a time. On these occasions their operations or repose are not regulated by the time of day. They hunt for twenty-four hours "at a stretch," perhaps, and then spend about as much in listless idleness. Their hunting operations are attended with much hardship and danger. One of the hunters is occasionally killed by a bear; sometimes one of them drifts away on a cake of ice, and is never heard of afterward.

A very marvelous escape of two young men happened in the winter of 1854–5. They traveled from their place of abode, situated about seventy miles from our winter harbor, to a distant village, at a season when traveling is most dreary and dangerous, namely, in the latter part of the month of December, a time when the cold is most severe and the darkness is most profound. Their purpose was to hunt the walrus, and in pursuit of these animals they took a route over the new ice. They succeeded in killing a walrus at a considerable distance from the shore; but they had scarcely despatched their prey, when a tremendous gale of wind arose, which produced a commotion in the sea that broke up the ice and left them exposed to the mercy of the waves. They took refuge on one of the largest icebergs which happened to be within their reach, dragging with them the carcass of the walrus which they had killed. The berg on which they were stationed soon became



WALRUSES.

detached from the surrounding ice and floated in the open water, being driven about by the winds. There was not even snow enough on the berg to make a hut, so they were obliged to encamp on the naked ice without any shelter; with no protection from the cold except the clothing they had on, and no means for making a fire. Their only food was the raw flesh of a walrus, and the frozen blood of the animal was their only drink, if it may so be called. In this condition they lived twenty days; when the gale ceased, and soon after the berg was again surrounded by young ice strong enough to bear them, whereby they were enabled to reach the shore. The place where they landed was about thirty miles distant from the spot from which the iceberg had started, and they were the first, perhaps, who ever traveled so far on the same kind of conveyance. The feet of both of these persons were frost-bitten; but one of them visited our ship a short time after this adventure, and he was then as well as ever.

Other hunters have been obliged to abandon their dogs on the ice, at times when it broke up so rapidly that they were compelled to fly for the preservation of their lives. As lazy as the Esquimaux are by nature or habit, their situation compels them to bestir themselves occasionally; but their indolence and ill-luck combined often reduce them to a deplorable state of starvation. During December of 1854, and the first two months of 1855, the kinds of game which they are accustomed to hunt were very scarce, and the wretched savages suffered terribly for want of food. Such was their necessity that they were compelled to slaughter their dogs and make butcher's meat of them; but as these animals were as lean and emaciated as so many poets, an inconsiderable amount of food was obtained from their dead bodies, and the quality of the viands was such that they would not have been acceptable to any stomachs except the well-toned ones of the Esquimaux. Dr. Kane's celebrated suppers on fricasseed rats were much more savory. During this season of scarcity, the want of blubber with which to supply the lamps on which the Esquimaux depend for light and warmth in their huts, compelled the poor creatures to sit in the cold and dark. However, the famine lasted only for a few months; and as the Esquimaux resembles in constitution the bear, the anaconda, and other voracious animals, they can endure hunger or a scanty supply of food for a long time, without much apparent inconvenience, taking care to make themselves amends by excessive gluttony when a plentiful supply of food is obtained.

CHAPTER XI.

ESQUIMAUX HUNTING.—BEAR BAITING EXTRAORDINARY.—WALRUS CATCHING.—SINGULAR CUSTOMS.—ESQUIMAUX GENEROSITY AND BENEVOLENCE.—FOURIERISM IN GREENLAND.—OUR SITUATION BECOMES DESPERATE.—ABANDONMENT OF THE SHIP AND THE MAIN OEJECT OF THE EXPEDITION.

When the Esquimaux go on a bear hunting expedition, the first object is to discover Bruin's tracks on the ice. When these are seen, the dogs attached to the sledges go in pursuit at full speed. As soon as the bear appears in sight the dogs are released from their harness, and soon overtake the object of pursuit. They attack him on all sides, or rather menace him with battle, but take good care to keep out of his reach, seeming to understand that they are no match for the enemy at close quarters. In fact, the Polar bear can kill a large dog with a single stroke of his paw. While the bear is engaged with the dogs, turning around and around to repel them on all sides, the Esquimaux approaches and takes a fair opportunity to pierce the side of the beast with his lance. But one stroke is not sufficient to kill him, and the hunter must withdraw his spear and make another thrust. As soon as the bear is wounded he turns furiously on the hunter, disregarding the insults of the dogs. At this critical moment all the caution, skill, and tact of the hunter are required to save his own life. He watches every motion of the bear, steps aside to avoid his first onslaught, and before the creature can wheel around the lance is again buried in his side. It often requires many such wounds to dispatch a bear, or even to unfit him for battle. During the whole fight the wounded bear groans in a horrible manner, and the incessant howling of the dogs increases the frightful din of the combat. Considering how imperfectly the Esquimaux hunter is armed—his bone-tipped lance being but an awkward and comparatively inefficient weapon—it certainly requires some chivalric spirit to undertake such a combat; and it is really a matter of surprise to find the human combatant generally successful, as the advantages seem to be on the side of the bear. When the animal is slain he is immediately cut open by the victor, and the entrails are given to the dogs. By the joint efforts of the hunters and the

dogs the carcass of a bear is soon made a bare skeleton, every eatable portion being devoured with astonishing celerity.

The walrus is caught by harpooning, in which operation the Esquimaux exhibit some dexterity. The hunters keep a watch on the edge of the ice, and as soon as a walrus shows himself above water the harpoon is launched at him. This instrument is fastened to one end of a stout strip of seal skin, the other extremity of which is wound about the hunter's body. His feet are planted firmly against a small hummock of ice, to prevent the animal from drawing him into the water. As soon as the harpoon is fastened in the body of the walrus, it dives below the surface, as the whale does in similar circumstances, but soon after reappears to take breath. At this moment the hunter hauls in the slack of his line and stabs the animal with his lance; and this he does every time the walrus appears on the surface of the water, until it is killed. It sometimes happens that when the walrus is wounded he grows desperate, and comes up on the ice to make battle with his foe. But his form is so unwieldy and his motions so clumsy, when he is out of the water, that he is easily dispatched by his antagonist. The white whale, narwhal, and sea unicorn, are killed in a similar manner.

There is a singular law or custom among the Esquimaux in relation to the division of game, when several persons are present at the time it is killed. He who gives the first wound is entitled to the best part of the animal when it is killed; but every person who is on the spot, whether he assists in killing the beast or not, is entitled to a share. On other occasions much liberality is shown by these people. When one of them has caught any animal, he dispenses a portion of it to his less successful neighbor. Likewise, when the autumnal hunting is unsuccessful among the inhabitants of the southern villages, they migrate to the northern settlements, the residents of which share with them, not their provisions only, but the use of the huts, sleeping conveniences, and every thing else which their necessitous circumstances require. I fear that so much brotherly kindness is rarely to be met with in Christian communities. A sort of socialistic system seems to prevail among these savages, but they have not yet attained to the last refinement of Fourierite philosophy—the community of wives; and it is to be hoped that they will long remain ignorant of that modern improvement in man's social and domestic relations.

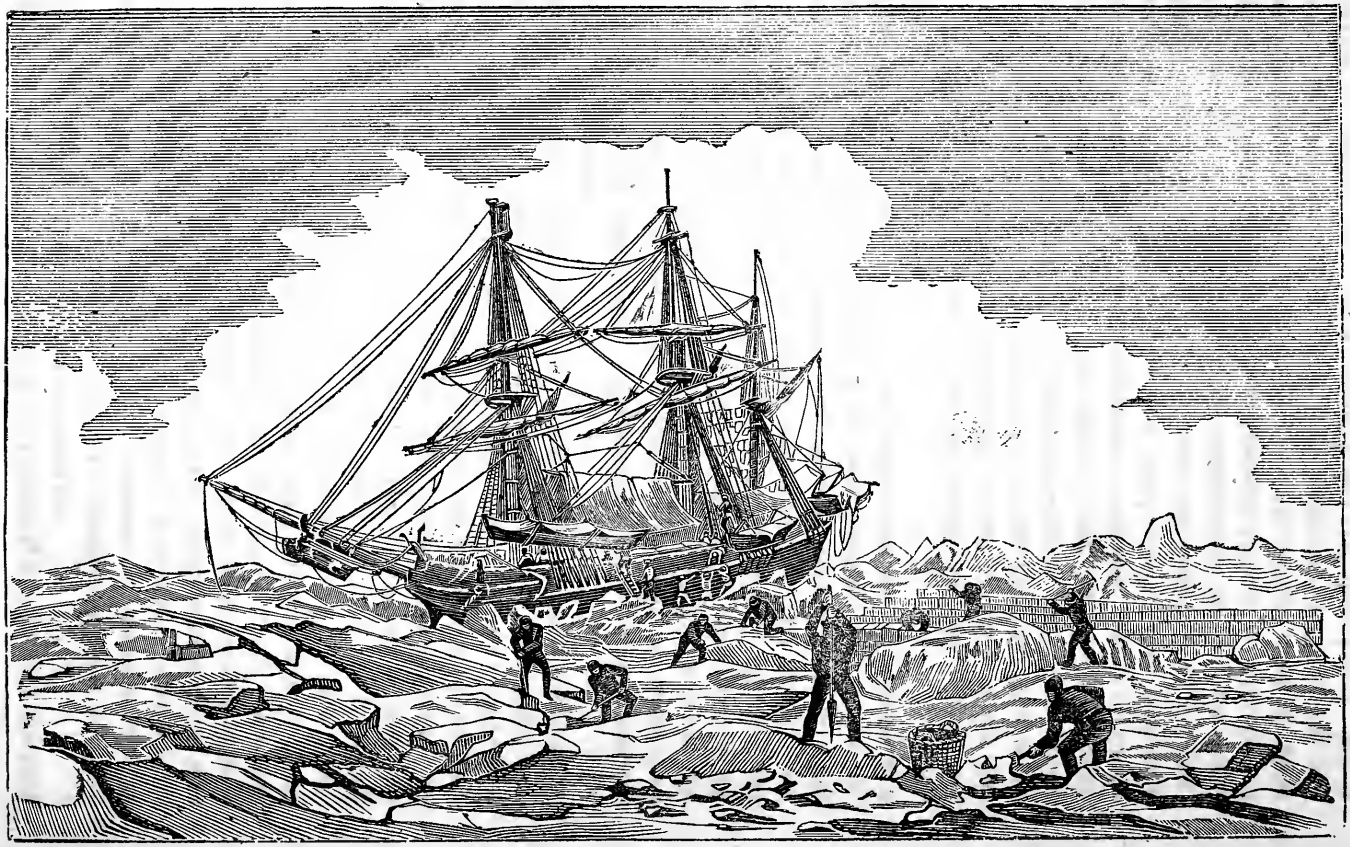
The philanthropy of the Esquimaux is not confined to a narrow sphere. Their benevolence shines not only on their own countrymen, but on strangers likewise. Many persons attached to our expedition bear in

grateful remembrance the many acts of kindness and friendly attention they received from these *soi disant* "savages."

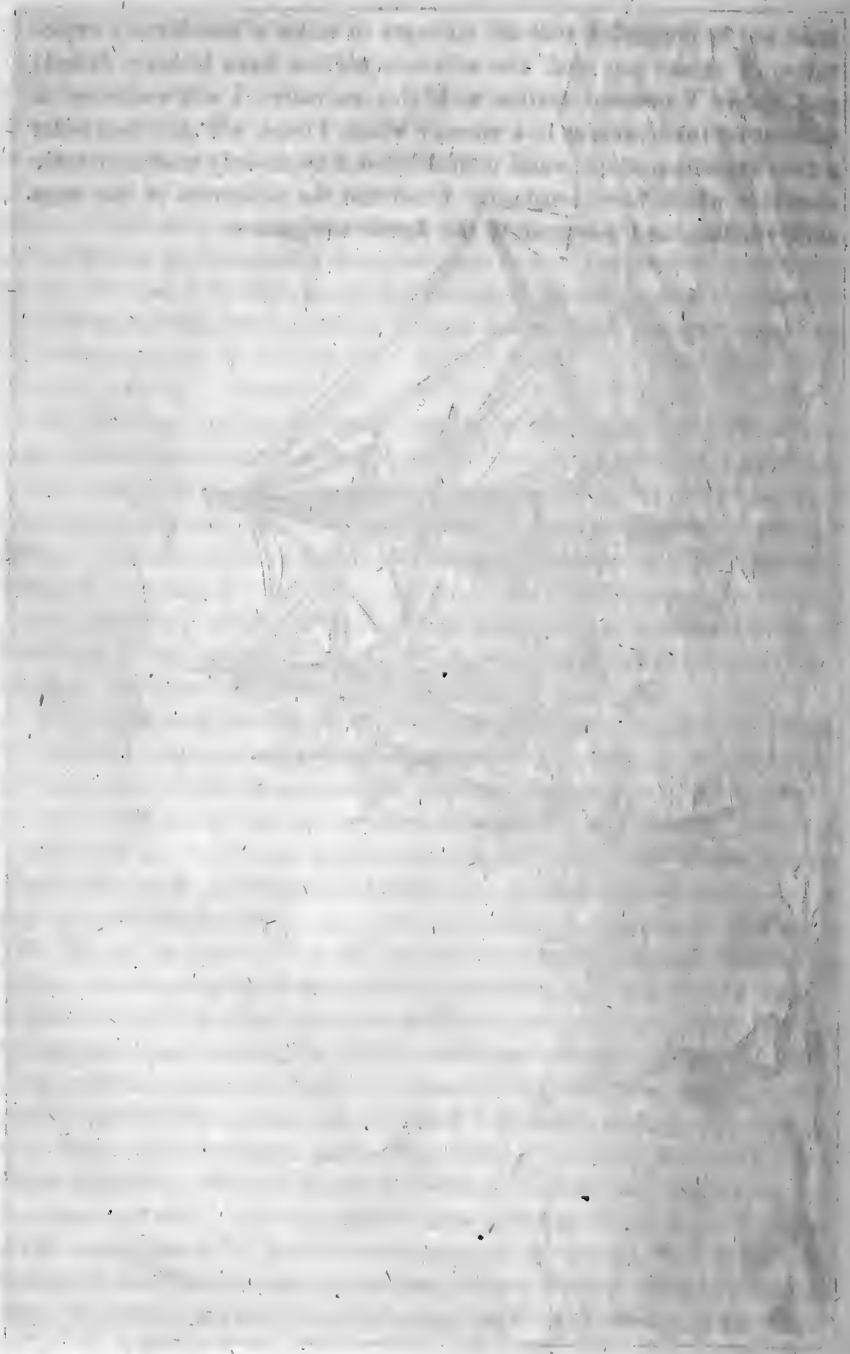
It has already been mentioned, that the fresh meat which had been supplied to us by the Esquimaux was the means of restoring many of our people who were sick with the scurvy. This was a circumstance of great importance to the success of our enterprise, as some of the men who had been sick, and apparently at the point of death, soon became able to travel, or to make preparations necessary for a long journey in boats. We had now abandoned all hopes that the ship would be liberated from the ice that season; and truly it appeared not very improbable that she had found her final resting place. In the preceding year, the sea had not opened within less than forty miles of the *Advance;* and, as the last winter was much more severe than the first one which we passed in that locality, there was good reason to suppose that the ice would not break up this year as far as it did in 1855; and, in that case, the escape of the ship would be still more difficult, and, in fact, hopeless. The subsequent event proved that these expectations were well founded.

Our provisions were almost exhausted, and our fuel was entirely consumed. Every piece of wood which could possibly be taken from the ship without making her useless, had been burned before the middle of May. Writing desks, fancy boxes, and many other articles of considerable value, were likewise devoted to the flames. Some of our salt pork, which had become rather the worse for long keeping, was also appropriated to the same use. I verily believe that we would have burned whole cords or tons of the most popular books of the day, (especially novels and poetry,) or any other combustible matters, if it had been within our reach.

We found, in short, that it was impossible to hold out another season, and no alternative remained for us but to abandon the ship and to attempt a passage in boats to those seas which are frequented by whaling vessels, or to the Danish settlements on the northern coast of Greenland. A council of the officers being called, it was unanimously resolved that this retrogressive movement was imperatively necessary, and the only measure that could possibly save us from a horrible death by starvation. The reader will perceive that the journey now concluded on was a virtual abandonment of the main object of our expedition. We had, in some respects, been more fortunate and successful than most of our predecessors in the navigation of the polar seas; we had penetrated farther in a northern direction than any navigator, Captain Parry only excepted, had ever done before; but it



FAST IN THE ICE.



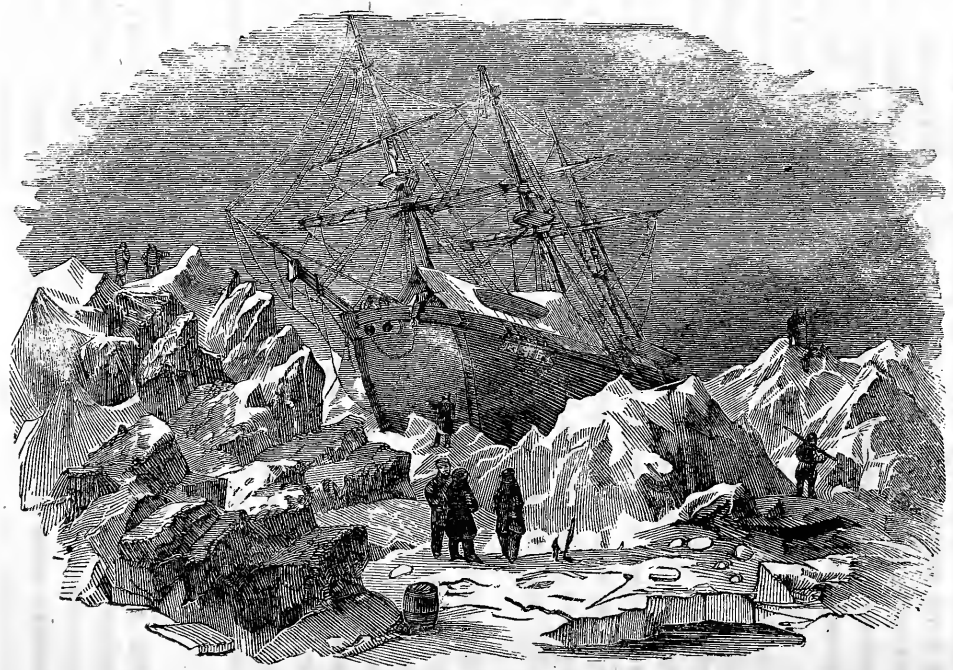
must not be concealed that *all* attempts to make a satisfactory exploration of those seas and the adjacent regions have hitherto failed; and before I proceed farther with this narrative, I will endeavor to account for these failures in a manner which, I hope, will give the reader a true exposition of the grand difficulties and apparently insurmountable obstacles which have constantly frustrated the endeavors of the most able, resolute, and energetic of the Arctic navigators.

CHAPTER XII.

THE REASONS WHY ALL ARCTIC EXPEDITIONS HAVE BEEN FAILURES.—CAPTAIN PARRY'S EXPLORATIONS THE MOST SUCCESSFUL.—SUGGESTIONS FOR A NEW PLAN OF ARCTIC EXPLORATION.—THE POSSIBILITY OF REACHING THE NORTH POLE.—HOW THAT OBJECT MAY BE EFFECTED.

THE nearest approach to the North Pole ever made by an European or American navigator, was the memorable achievement of Captain Parry, on the 23d day of July, 1827, when he reached the high northern latitude of 82° 45′. The day was one of the warmest and most pleasant that Captain Parry had experienced in that climate; and had it not been for the soft state of the ice and the strong southerly current, which operated against the northern progress of Captain Parry's party, it is conjectured that he might have continued his journey to the *pole itself*.

In a letter to the British Admiralty, dated London, Nov. 25, 1845, Captain Parry declares his belief in the practicability of reaching the North Pole by traveling over the ice; and he attributes his failure in 1827, solely to the causes spoken of above, viz., the mushy condition of the ice and the strong adverse current. Captain Parry thinks that an approach to the North Pole is not a matter of such difficult attainment as is generally supposed, provided the undertaking is begun and carried on in the right manner. All who have devoted much attention to the subject, are thoroughly convinced that the Pole may be reached. Why then, it may be asked, has this object never been accomplished? It appears to me that the ill success of Arctic expeditions in general admit of an easy explanation. None of these expeditions have been suitably prepared for the explorations intended. After remaining for a winter, or two winters perhaps, fastened up by the ice, every exploring party has been compelled to return for want of a sufficient supply of provisions and fuel. The account I have given of Dr. Kane's failure in this enterprise is, in the most material points, a repetition of the history of every former undertaking of the same kind. The adventurers are invariably driven back by hunger and cold, from the effects of



HEMMED IN LANCASTER SOUND.

which, with better management, they might have been protected for a much longer time.

The best plan for conducting a Polar expedition that has ever been proposed, is the following:—Only one ship should be engaged in the enterprise; in this ship the exploring party should go to Spitzbergen, as Captain Parry did in the *Hecla*. But the time of starting should not be too early in the season; for it was to that error chiefly that Captain Parry imputed his failure. The first object, or the main object for the first year, would be to find secure winter-quarters as far northward as possible. For this purpose it would be necessary merely to reach Hakluyt's Headland by the end of June. This would afford a sufficiency of time to examine the more northern lands, especially about the Seven Islands, where, in all probability, a secure nook might be found to serve as a station for the ship, and a starting point for the proposed expedition—which from thence would proceed by sledge conveyance over the ice and snow. This starting point might be fixed some forty or fifty miles in advance of the place where Parry's first winter-quarters were established. The winter might be passed in various preparations for the spring journey, and in magnetic, astronomical, and meteorological observations, which, being made in that latitude, would be of great interest and importance. The expedition should leave the ship about the middle of April, when the ice would present one hard and unbroken surface, over which, as I confidently believe, a progress of at least thirty miles per day might be made with little difficulty. Among the advantages of this course, I may mention that it would be attended with comparatively little exposure to wet and to that disease so annoying to Arctic travelers, called snow-blindness. Besides, the ice at this season would probably be stationary; and thus the two great difficulties which Parry's party had to encounter would be entirely obviated.

It would likewise be advisable to establish depositories of provisions one hundred miles in advance, by sending out a party for that purpose in the latter part of the winter, or at the beginning of spring, before the journey of the exploring party is commenced. By this means, the last-named party could begin the journey without being overburdened with luggage, as they would depend on the provision depot for a part of their supplies.

With regard to the mode of traveling, it may be remarked, in the first place, that *expedition* would be highly necessary, as the whole journey would have to be completed before the end of May; or before any disruption of the ice or any material softening of the surface should

take place. During the absence of the exploring party supplies of provisions might be stationed along the route for the use of that party on its way back to the ship. With respect to the draught-animals to be used in this enterprise, I think that reindeer are far more eligible than dogs. The former have more speed and greater powers of endurance than the latter; they are more healthy animals, equally as tractable, and require much less food; and the latter would be an important consideration, as it would be desirable to carry as small a load of provender as would answer the purpose.

A supply of these useful creatures might be obtained at Hammerfisk, on the passage; and I think there would be no difficulty in keeping them alive during the winter, as they could be fed on such farinaceous food as the resources of the ship could supply.

Nothing can be more admirable (the operations of the "iron horse" alone excepted) than the performance of the Lapland reindeer in harness. This deer is the paragon of traveling quadrupeds. Its docility is wonderful; the Arabian courser is not susceptive of better training. With a simple collar of skin around his neck, a single trace of the same material attached to the pulk, or sledge, and passing between his legs, and one rein fixed, like a halter, around his neck, this intelligent creature is perfectly under the command of an experienced driver, and is able to perform astonishing journeys over the softest snow. His motions are more easily directed than those of the horse. When the rein is thrown over on the off side of the animal he immediately sets off at full trot, and he stops short the moment it is thrown back to the near side. Shaking the rein over his back answers all the purpose of the whip. For his maintenance the animal requires only four pounds of clean moss *per diem*, but in case of necessity they can travel five or six days without food; nor does this abstinence seem to affect their health or good spirits. The case is very different with dogs, which require a large amount of animal food—a sort of provision which is often very hard to procure; and besides there is such a difference in the ability of the two, seeing that six or seven dogs are required to perform the same amount of work which one reindeer can execute with apparent ease. The only drink required by these deer is snow, which need not be melted for the purpose. They can sleep on the naked ice; and, in short, they are the least troublesome and expensive animals that ever entered into the service of mankind. A reindeer can travel eighty miles in one day without much exertion. From what has been said I think it will appear that these animals would be of immense advantage to an Arctic expedition; and the great wonder is that a

truth so very obvious has not forced itself on the attention of every man who has attempted to explore any part of the Polar regions.

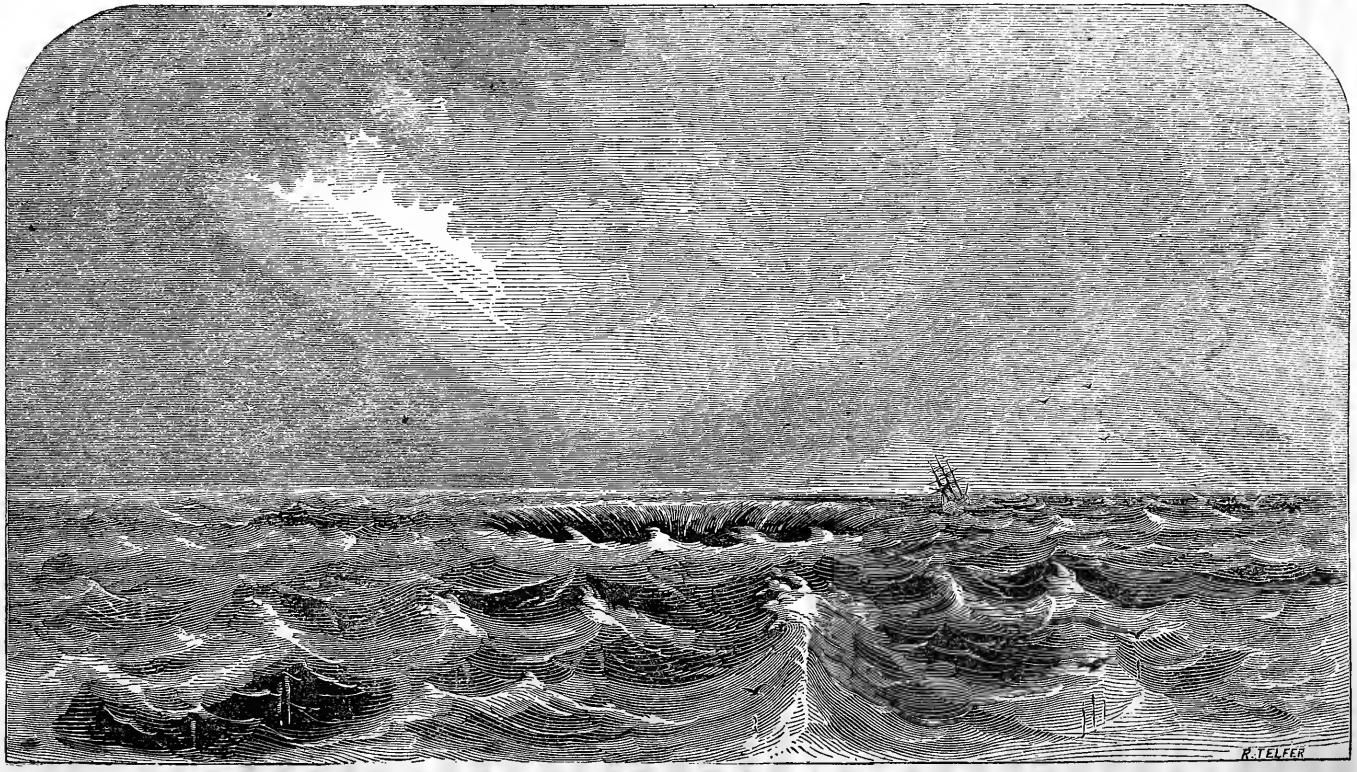
The distance from Hakluyt's Headland to the Pole is six hundred geographical miles. Supposing that the traveler should proceed but twenty miles in twenty-four hours, only one month would be required to enable the adventurer to place his foot on the very pivot of the earth's axis. He might remain there a month, if necessary, to collect all desirable information, and then return in one of those easily-constructed canoes which are made and used by the Esquimaux on the southern coast of Greenland. The southwesterly currents, within a fortnight, or less time, perhaps, would bring him back to Spitzbergen.

I am aware that many persons will see great difficulties and perils in attendance on the plan of exploration here proposed. But where is the undertaking which promises either glory or profit that has no attendant risks or inconveniences? To the timid and irresolute objector, I will make the same answer which was given by that brave old navigator, Sir Martin Frobisher, when his friends would have persuaded him not to engage in a northwest passage. "It is the only thing in the world (said he) that is left undone whereby a man of moderate abilities may become famous." We may still say that the North Pole is almost the only thing in the world about which we know nothing; and the time has come (according to my views) when our ignorance on that subject admits of no apology.

CHAPTER XIII.

AN ATTEMPT TO ANSWER THE QUESTION, "OF WHAT USE ARE ARCTIC EXPLORATIONS?"—"WILL THEY PAY?"—HINTS FOR ENTERPRISING CAPITALISTS AND YANKEE SPECULATORS.—ADVANTAGES OF POLAR RESEARCHES TO THE CAUSE OF SCIENCE—AN OBJECT WORTHY OF THE NOBLEST AMBITION.—OBSERVATIONS TO BE MADE AT THE POLE.

"WHAT advantage would the world derive from a thorough exploration of the Polar regions?" I am sorry to say that this question, or something like it, is often asked by men who pretend to intelligence and good judgment. The utilitarianism of this age is often extravagant in a high degree. Some people can see no use in any thing which does not immediately put money into their pockets. Pecuniary profit is the only consideration. A dollar-producing enterprise, whatever may be its objects and tendencies in other respects, is altogether glorious with them, and every thing else is a stumbling-block and foolishness. In order to meet the objections which such people make to Polar explorations, we may remark that the enterprise may "pay well," according to the common commercial acceptation of that phrase. We do not know what valuable productions of nature may be obtained from the lands or seas in the immediate neighborhood of the North Pole. If a tract were once opened, or a practical route and available means of travel and transportation were once devised, who knows what new fields would be opened for commercial enterprise? Who can estimate the value of the Polar fisheries, or the Polar fur trade? Who knows what handsome sums might be realized by conveying passengers to a spot where every object would be novel and curious? The day may come when excursions to the Pole may be as much within the scope of Yankee contrivance, as Fourth of July excursions to Washington city or the Falls of Niagara. Who knows but that a veritable sign-post may be erected by some "Down East" speculator on the very turning-point of the terrestrial sphere, where a house of entertainment may be established, with a table richly furnished with all the delicacies of the climate, and a bar well stocked with choice liquors, for the convenience of those who may prefer the North Pole, as a place of summer retreat,



NORTH POLE—THEORETICALLY.

to Cape May or Saratoga Springs? What an opportunity for a "good investment" is here suggested!

But apart from all considerations of a mere pecuniary nature, there are other objects connected with Polar discovery which should claim some attention from the men of this refined and intellectual generation.

Dr. Samuel Johnson once said that the man who had seen the great wall of China might be considered as shedding a lustre on his grandchildren. But, after all, what a comparatively insignificant thing is the wall of China! Many of our small-beer poets and traveling newspaper correspondents, in their desperate struggles for distinction, and their anxiety to obtain piquant materials for a paragraph, have scaled the broad parapets of the China wall and promenaded its summit for miles together, without being one jot or tittle the wiser or better for such achievements. How much more glorious in the estimation of every truly wise man, would be that individual who should succeed in placing his foot on the extreme point of the earth's axis; and what a lustre would he shed on his descendants to the third and fourth generations! To stand where no mortal man has trodden before—to perform what many adventurers and heroic men have attempted in vain—to walk over the most remarkable spot on the earth's surface—these, I should think, are objects which ought to satisfy any rational ambition—far more excusable objects of ambition than the slaughter of armies and the subjugation of empires.

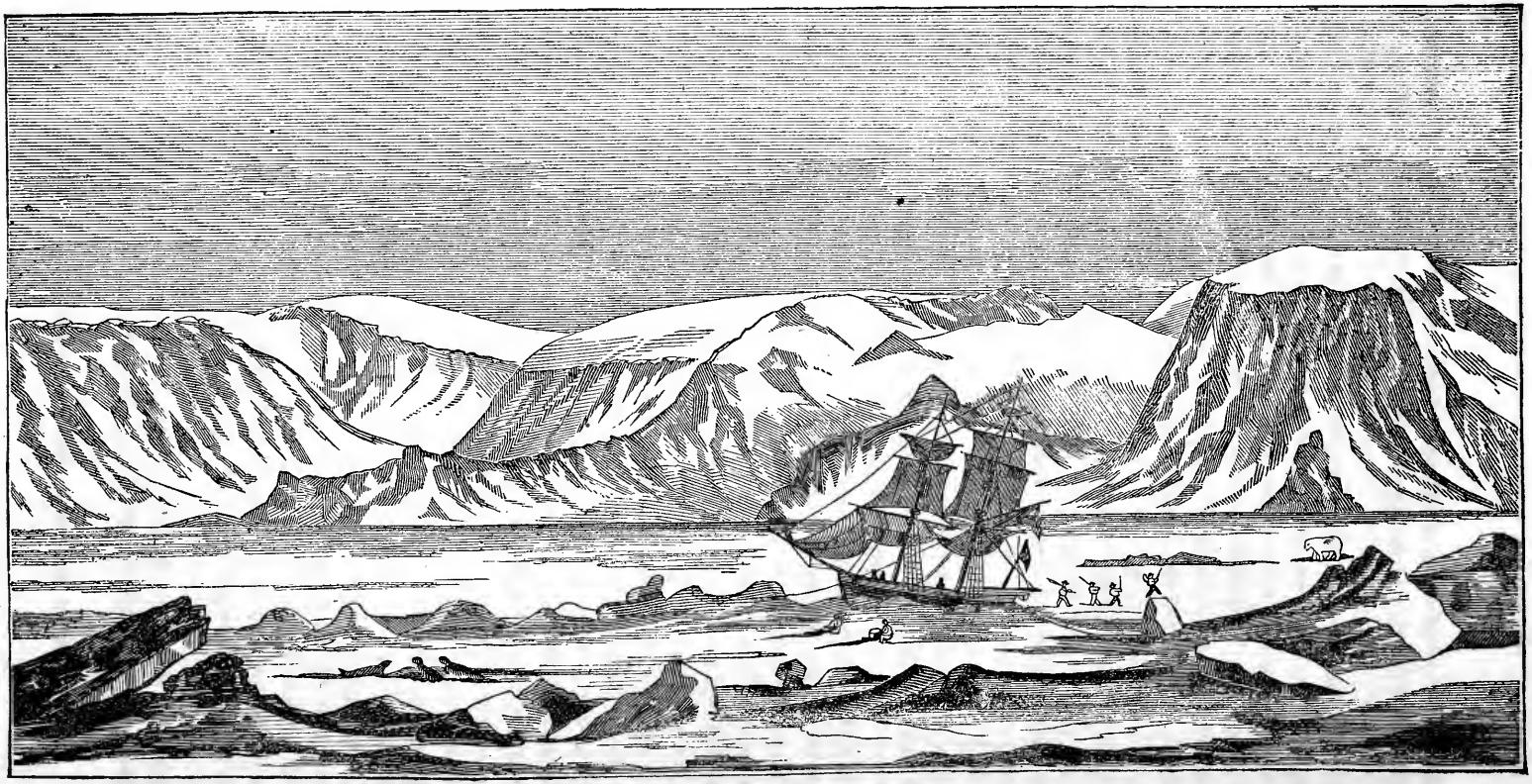
As the land adjacent to the Pole is all *terra incognita*, it is impossible to say what additions to the stores of natural science a visitor to those regions might be able to make. Certain it is, however, that a new and wide field would be opened for his investigation. Every thing there would be novel; and that circumstance alone would be well calculated to stimulate his attentive faculties. The difficulties which would present themselves to the investigator may be appreciated at home; but they would be greater or less according to circumstances of which we know nothing. We know not, for example, whether the Pole is covered with open water, or icy sea, or dry land; nor do we know which of these three conditions would be most favorable for investigation. It may be presumed, however, that an open sea would be, in several respects, the most disadvantageous. In the first place, it would in all probability be so deep that the ship would be unable to anchor; and the current might be too strong to permit her to keep stationary long enough to make accurate observations. In the second place: if she could not maintain her position steadily at one point, the commander would experience a new embarrassment, viz., as every meridian must

extend southwardly, he would be apt to lose that on which he had approached the Pole—and consequently he would be at a loss how to shape his course homeward.

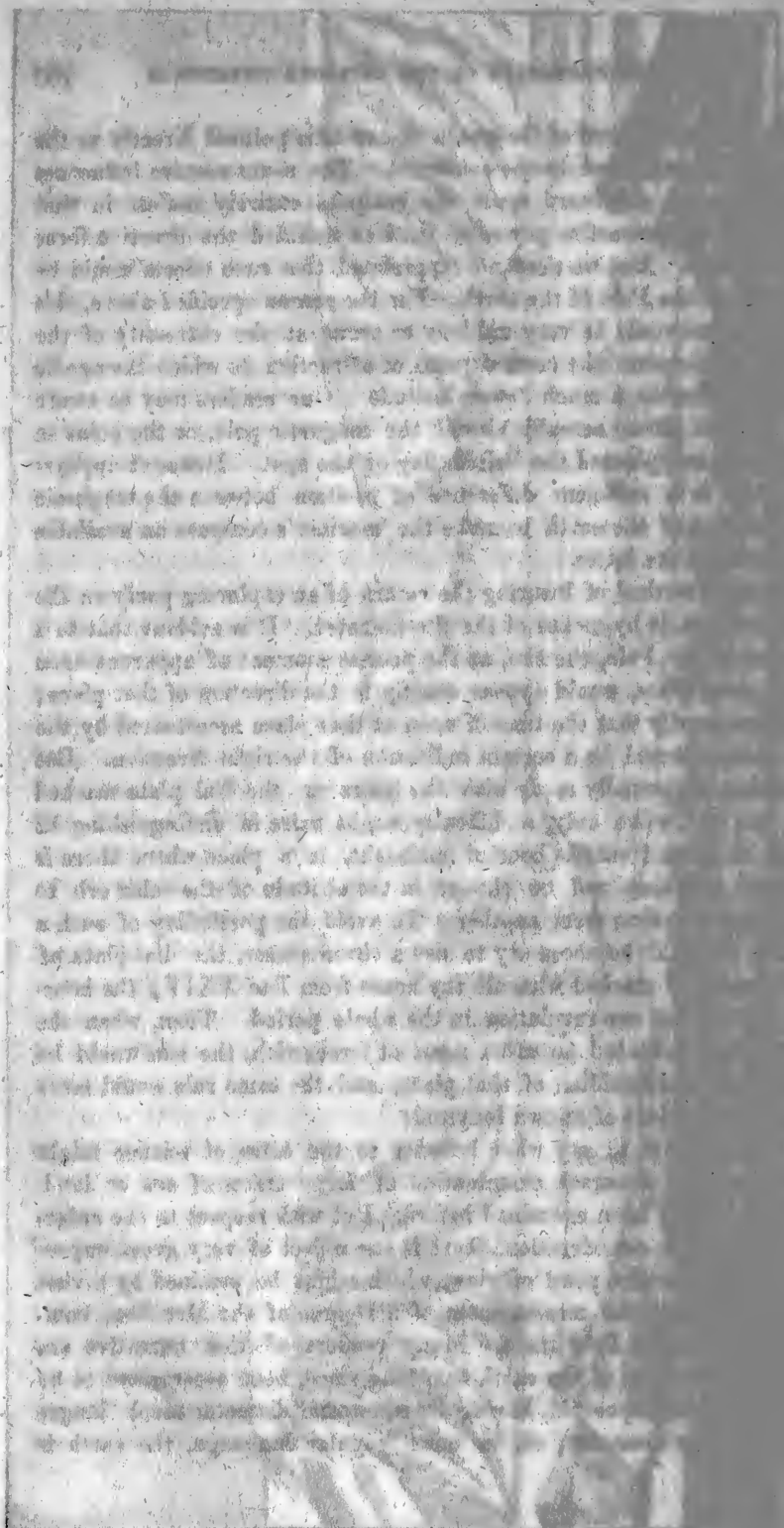
The occurrence of this strange difficulty will naturally present itself as one among many novel phenomena which will arrest the adventurer's attention, and the following observations would probably occur to him on the spot. The time of day (to use that phraseology for want of any other that would be more appropriate) would no longer be marked by any apparent change in the altitude of the sun above the horizon; because to a spectator at the Pole no such change would appear, except to the small amount of the daily change of declination. Thus, not only to the eye, but also for the practical purpose of obtaining the time by astronomical observations, the sun would appear throughout the twenty-four hours neither to rise nor fall, but to describe a circle round the heavens parallel with the horizon. Therefore, the usual mode of ascertaining the time would utterly fail; and indeed, however startling may be the assertion, it is nevertheless true, that time, or the natural distinction of time, would be no more. This will appear from the consideration that the idea of apparent time refers only to the particular meridian on which an observer happens to be placed; and is marked or determined only by the distance of the sun, or some other heavenly body, from that meridian. Now, as an observer at the Pole is on no one meridian, but is stationed at a point where all meridians meet, it is evident that "apparent time" for him has no existence.

Before Sir John Franklin left England on his last voyage to the Arctic regions, his attention was naturally directed to the best means of insuring his return from the Pole *on the right meridian.* The only two practicable methods which occurred to him, were:—1. By the help of the compass: 2. By means of chronometers. From the observations which have already been made in regions far toward the North it may be considered that at the Pole, the magnetic needle would freely traverse, and that the compass would retain all its efficiency. For, as it is to the *magnetic* pole and not to the pole of the earth, that the needle is directed, and as the dip of the needle amounts to but 82° 22′ at the most northerly point which has ever been reached, it is probable that the horizontal or directive force of the needle would remain strong and efficient at the Pole, and, consequently, that the magnetic bearing of any point on the globe might be ascertained by the instrument even at the Pole itself.

Captain Parry on his voyage through Barrow's Strait observed some remarkable phenomena in relation to the movements of the magnetic



HAKLUYT'S HEADLAND.



needle. The north end of the needle at one time pointed directly to the south, and then shifted to the southeast. The counteractive influences of the iron on shipboard made the compass entirely useless in that locality, as the attractive power of the iron nullified the directive force of the needle. But we need not apprehend that such effects would be witnessed at the Pole of the earth. For the reason specified above, this inconvenience would be very unlikely to occur at the extremity of the earth's axis, because the central point of attraction to which the needle is directed lies in a much lower latitude. Our readers may be aware that Captain Ross actually visited the magnetic pole, or the point so designated, and planted the British flag on the spot. Hence it appears that there is a sufficient difference of position between the magnetic pole and that of the earth to make the mariner's compass an available instrument at the latter.

The other method of insuring the return of an exploring party on the right meridian, is by means of the chronometer. It is evident that to a spectator at the Pole, the sun, at the precise moment of apparent noon at any given place, would appear exactly in the direction of that place; and consequently that the time of noon at that place ascertained by the chronometer, would be a certain indication of the right direction. But as watches are usually made with the hours on the dial plate marked from one to twelve only, a difficulty might arise in distinguishing 12 o'clock at noon from the hour of midnight, in a place where there is perpetual sunshine and no change in the altitude of the solar orb to distinguish one time from another. To avoid the possibility of such a mistake, it would be necessary to use a chronometer, the dial-plate of which would be marked with all the hours from I to XXIV; the hour-hand making but one revolution in the whole period. Then, when the chronometer indicated apparent noon at Greenwich, the sun would be exactly over the meridian of that place, and the same rule would serve for any other place of known longitude.

It is impossible to say what benefits to the cause of science might result from an accurate examination of large tracts of sea or land, which had never been examined before. But with respect to the enterprise now under consideration, there is one object of very great importance, in a scientific point of view, which might be attained by a visit to the Pole, viz., the measurement of a Degree of the Meridian, commencing from the Pole itself. Many readers of this narrative are aware that the form of the earth has, long since, been ascertained to be that of an oblate spheroid, having its equatorial diameter much longer than its polar diameter; or, in more popular language, the earth is

turnip-shaped, being flattened or depressed at the poles. But it still remains a matter of doubt, *in what degree* this flattening exists; and there is no conclusive way of settling that question except by the actual measurement of a degree at the Pole, and comparing it with the length of a degree at the Equator. The attainment of this object alone would be an ample compensation for the labor which would be required to effect it. If a sufficient length of line could be measured on one of the meridians which are clustered at the Pole, the operation would require the most rigid attention, as the accuracy of many future calculations would depend on the precision of that measurement.

The ellipticity of the earth may be ascertained by the swinging of a pendulum, but this method is liable to some objections. It is an operation which may be conducted by one person however, whereas the actual measurement of the meridian line would require several persons; and, as an increase of gravitation takes place from the Equator to the Pole, it is desirable that the requisite observations should be made at the latter point, or as near it as possible. But a ship on an open or icy sea would not afford a convenient locality for these experiments.

Should land, or any portion of it, however small, be found at the Pole, or near it, all the required observations might be conducted to a successful issue. It may be presumed that if any such land exists, it is not of a mountainous character, as no icebergs are ever sent down from that quarter. These masses are known to be the products of glaciers on the sides of high mountains and in the intermediate valleys, especially those glaciers which exist in Spitzbergen and Greenland.

On a piece of land, at or adjacent to the Pole, the pendulum may be swung, and the rise, fall, and direction of the tides may be observed. It would be interesting also, to examine the nature of the soil and its vegetable productions, the disposition of the strata, and the mineral products, if any. And, if the land be of sufficient extent, the meridional distance may be measured.

The tides at the Pole would be a deeply interesting subject for examination; and many other important matters, such as magnetic phenomena, atmospherical electricity, and the *aurora polaris*, with various other meteorological facts, would claim the attention of the scientific observer. I hope, therefore, that the ultra-utilitarians themselves will concede that Arctic discoveries are of practical importance enough to justify the labor and expense which may be necessary to prosecute them to a successful result.

CHAPTER XIV.

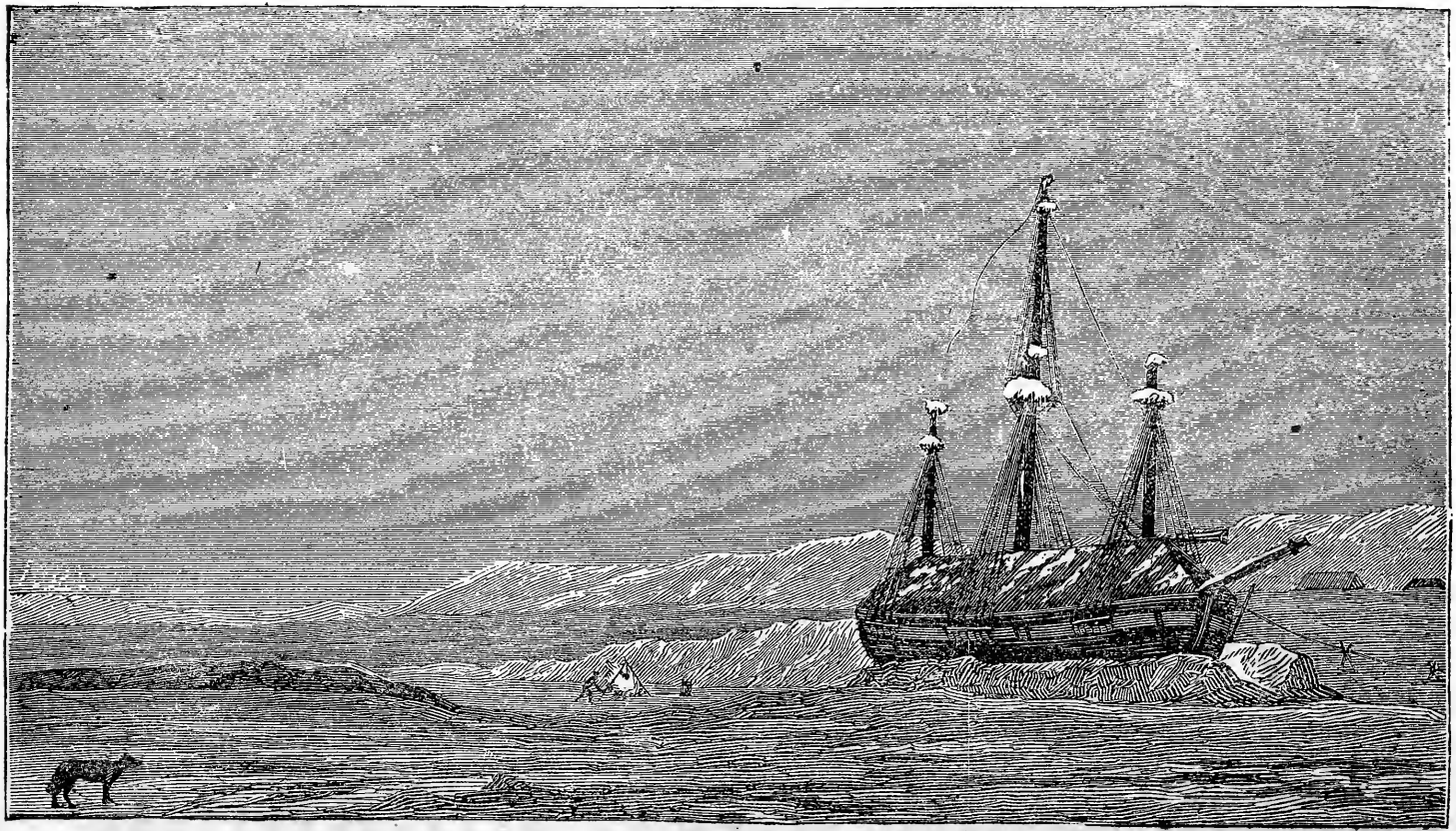
DEVOTIONS ON SHIPBOARD.—WE BID A FINAL ADIEU TO THE "ADVANCE."—THE CELEBRATED BOAT JOURNEY COMMENCED.—APPALLING DANGERS OF THIS ENTERPRISE.—TERRIBLE SUFFERINGS.—NARROW ESCAPE FROM DROWNING.—DISTRESSING ACCIDENT.—DEATH AND FUNERAL OF THE CARPENTER.—A GRAVE UNEXPECTEDLY PROVIDED.

HAVING resolved to abandon the ship, we all applied ourselves to making the most active preparations for our journey over the ice, which promised to be a very toilsome and unpleasant enterprise. Provisions were put up in canvas bags, made to fit under the seats of the boats in order that they might occupy as little space as possible. The mode of traveling we had decided on was by sledge conveyance, as long as the ice should be found solid enough to answer that purpose; and after we had crossed the icy girdle which surrounded the ship, our plan was to proceed in the boats, (three in number,) which we were obliged to carry with us, as heavy and unwieldy as they were. To carry out this design, we constructed three sledges, each one large and long enough to carry a boat. The boats were placed on the sledges in the same positions which they would have assumed in the water. Our sick people and the provisions were then placed in the boats, each of which was very heavily laden; and indeed to prepare them for the hard service they would be required to perform, it was necessary to strengthen the boats by additional planks and timbers, which of course greatly increased the weight.

While these preparations were going on, Dr. Kane himself made two final attempts at exploration in a northern direction, his principal object being to cross the channel and to continue the examination and search which had been commenced in the preceding year. In pursuance of this plan, he commenced his journey in a dog sledge with two Esquimaux attendants, one of them doing duty as a guide, and the other as driver of the dog team. But when he and his savage companions had proceeded to the distance of a few miles from the ship, some bear-tracks were unfortunately discovered on the ice—and then no persuasions or inducements could prevail on the Esquimaux guide and driver to proceed one yard further in the direction which Dr.

Kane wished to travel. They held to the opinion that the capture of a bear was an enterprise of infinitely more importance than any project which could engage the attention of Dr. Kane. The Doctor was enforced, therefore, much against his inclination, to accompany his ardent companions on a bear-hunt, from which, when the first opportunity offered, he returned to the ship, very much out of humor with the Esquimaux race in general, and with his late guide and driver in particular. His second attempt was equally unsuccessful, though from a different cause. The condition of the ice, a few miles from the ship, was such as to make sledge traveling impossible; the whole surface being covered with hummocks and hillocks, over which the vehicle could not pass. These attempts having failed, the Doctor turned all his attention to that hazardous boat-journey which had been resolved on as the only means of extricating his company from the certain destruction which menaced them in their present situation.

The preparations for this journey having been completed, all hands were assembled on the deck of the ship for the last time. Our commander then made a solemn and impressive address to the company, reminding them of the obligations which they owed to Divine Providence for their preservation through so many dangers, and admonishing them to implore Almighty God for guidance and protection in the still greater perils through which they were about to pass. This address being finished, Dr. Kane read an appropriate and beautiful prayer, which had been written by the Protestant Episcopal Bishop of New York, expressly for the use of the Arctic expedition. There was something in these devotional exercises, or rather in the circumstances which attended them, which was well calculated to impress every auditor with feelings of reverential awe; and never perhaps did the incense of prayer ascend to the Throne of Grace from hearts more truly contrite and sincere, though our best and only temple was a dismantled ship clasped in the horrid embrace of the icy ocean. Many of the worshipers there assembled had lately risen from beds of sickness, and some of them were still afflicted with a painful and dangerous disease, with the gloomy probability before them that their last hours would be spent far away from home and kindred, with no sympathizing friend to whisper words of hope and consolation in the hour of death, and no pious drops of affection to soothe the anguish of their last moments. Even the wild and grotesque appearance of the worshipers, in their uncouth fur garments, added to the solemnity of the scene, by forcibly reminding us of our isolated condition, far removed from all hope of succor and aid from our own species. But we remembered that we



POSITION OF THE ADVANCE, WHEN ABANDONED.

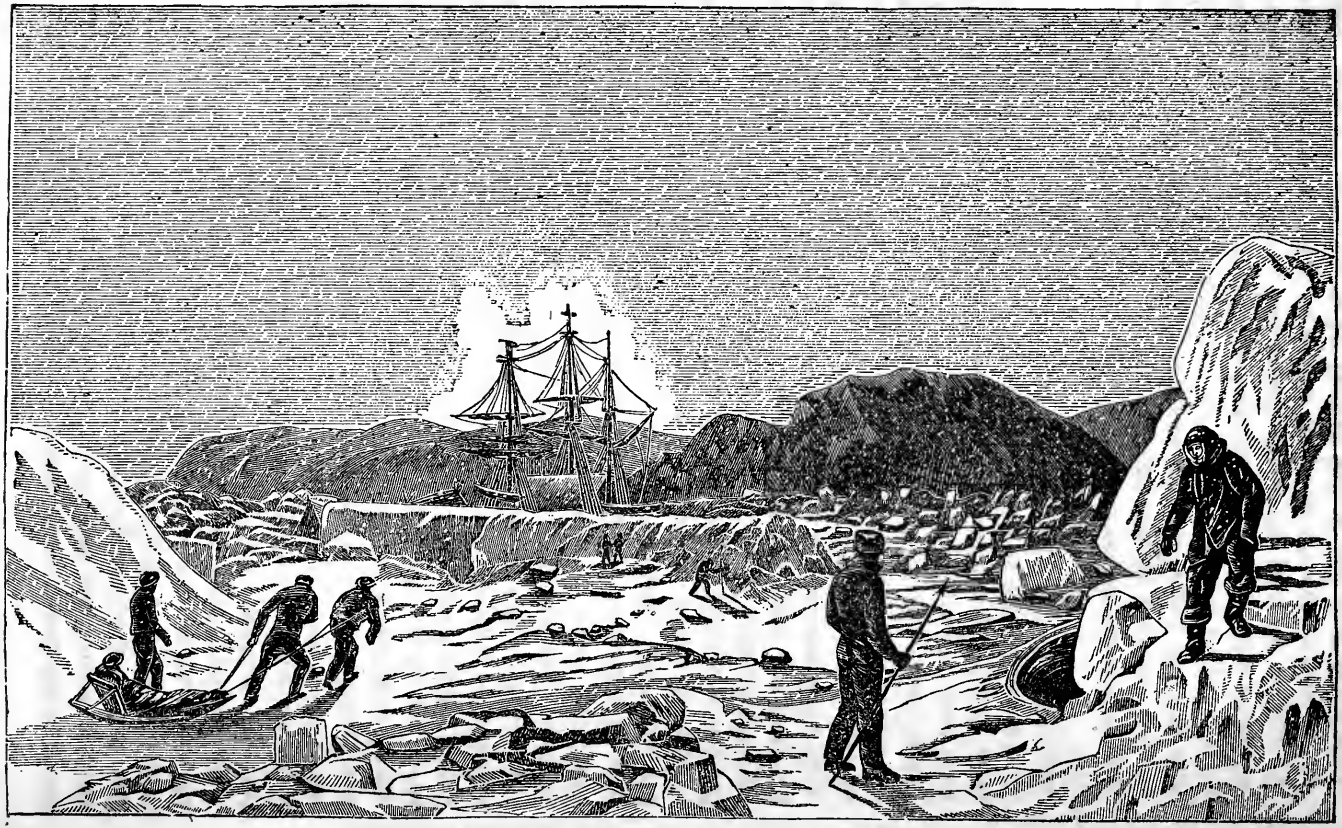
were still in the hands of that powerful and benevolent Being whose dominion extends even to the uttermost parts of the earth, and this assurance inspired us with hope and confidence; for we knew that no calamity could befall us, and no destruction overtake us, without his permission.

It was in the afternoon of May 17, that, after the performance of the acts of devotion just spoken of, our journey was commenced. The atmosphere was very much obscured by a dense fog, and Nature herself appeared to assume a gloomy and foreboding aspect. We began to experience the formidable difficulties of our undertaking at the very outset. Our dog teams were useless at that time, as the strength of the animals was altogether unequal to the task of drawing the heavily laden sledges. It was necessary therefore that the men themselves, or such of them as were not disabled by sickness, should be employed in the severe labor of drawing the sledges through the deep snow with which the frozen surface of the sea was covered. A canvas strap was attached to each sledge, and the men, taking this strap on their shoulders and marching in Indian file, drew the ponderous load along by dint of great exertion, their progress being most discouragingly slow, scarcely exceeding half a mile per hour. A small troop of pioneers, armed with shovels and axes, went before, to free the track as much as possible from obstructions.

When one sledge, with its superincumbent boat and lading, had been dragged by the tedious and laborious process I have described, to the distance of about one mile, the whole party returned to bring the second boat in the same manner; and so with the third, and last. In some places it was necessary to use levers to force the sledges over hummocks, and other obstructions which could not otherwise be passed. Dr. Kane, in the mean time, was engaged in conveying provisions in the dog sledge to a point some distance ahead, where, as soon as he had deposited one load, he returned for another. By the time at which the third sledge was dragged up to the spot where the two others were waiting, the men were all so thoroughly fatigued that nothing more could be done that evening, although we had advanced scarcely one mile from the ship. To afford the men an opportunity for repose, canvas covers or awnings were placed over two of the boats, and all hands, (except one who was appointed to keep watch) "turned in," as the sailors say, or in the phraseology of the land service, went to bed. Meanwhile the watchman, who also exercised the functions of cook, prepared a pot of hot tea for the refreshment of his comrades when they should turn out.

The slow progress we made was disheartening, especially when we considered that, in all probability, the immense platform of ice over which we were traveling became more extensive every day, as the freezing process was still going on. The difficulty of traveling increased every day—the ice becoming rougher as we proceeded southward. At many places the current beneath had worn or washed the ice away, making it too thin and frail to afford us a safe pathway. Several times the sledges broke through, and it required our most strenuous exertions, for hours at a time, to place them again on ice that was solid enough to support them. Of course, the men broke through with the sledges, and several of them had very narrow escapes from drowning. One in particular disappeared under the ice, and we had given him up for lost, when to our great surprise and gratification he appeared at another opening, and was dragged out in a state of insensibility, from which he recovered in about half an hour. Besides the danger attending these accidents, the repeated wettings which the men received were seriously afflictive—as the water in which they were submerged was of the temperature of melting ice, and we had no conveniences for warming ourselves or drying our apparel. Another great trouble to us was the prevalence of snow-blindness among our party; as this disease, besides producing a great deal of suffering, occasioned much delay and inconvenience, because every person afflicted with the malady was compelled to keep his eyes closely bandaged, and to be led along by some other member of the party who had the use of his eyes. And there was yet another cause of distress; our provisions began to grow scanty, and that which we had was not of a very agreeable or wholesome quality. We suffered very much from this cause, especially during the last days of our journey; and we might have been absolutely starved had we not, by a fortunate accident, met with several Esquimaux hunters, who charitably supplied us with some sea-birds which they had killed; and on these we subsisted for several days previous to our arrival at open water.

The temperature, which was below zero when we left the ship, became warmer every day; in consequence of this change, the snow became soft or mushy, and our men were obliged to travel all day with wet feet. As snow appears to have a peculiar tact in penetrating through every thing, our seal-skin boots afforded us very little protection from the damp and cold. As stated above, our progress seldom exceeded two or three miles *per diem*, except on several particular occasions, when we happened to be favored with a fair and strong wind.



FROZEN IN THE ICE OFF CAPE COMFORT.

At such times sails were hoisted in the boats, and all hands getting aboard, we skimmed over the ice with considerable rapidity, but experienced some difficulty in keeping the boats on the right course, for want of suitable steering apparatus. Sometimes our sledge-boats, when propelled in this manner, would be driven into huge snow-drifts, from which they could scarcely be extricated with all the exertions that we were able to make.

On one of these occasions, our carpenter, Mr. Ohlsen, while making great efforts to return one of the boats to the right track, ruptured a blood-vessel and died in consequence two days afterward. His death was an irreparable loss to the Expedition, which had often been extricated from great difficulties by his energy and ingenuity; indeed, there was no man of the party whose individual efforts had been of greater service to the enterprise. The circumstances attending his death, as well as the loss of his valuable services, made a very painful impression on us all. Latterly he had shown a very anxious desire to return to his family, and he exerted himself more than ever to accomplish this object; but when the principal obstacles were surmounted, and we were almost within view of the open sea, this most unfortunate accident took place, effectually cutting off all hopes of his return to his wife and children. When he perceived that his speedy death was inevitable, the only feelings of regret which seemed to disturb the tranquillity of his last moments, were apprehensions for the welfare of his family, and the painful thought that he must die so far away from the dearest object of his affections.

After he had breathed his last, the company halted for several hours to provide means for his interment. These means were scanty indeed, for we had not even boards enough to make a coffin; but a tomb was provided for him in a manner most unlooked for and surprising to us all. We happened to be in the neighborhood of a small isolated spot of ground called Littleton Island, which had formerly been discovered by Captain Inglefield. As this offered a suitable place for burial, we took the corpse on shore; and you may judge what was our astonishment when almost the first object we discovered on this island, was a *grave*, which Nature herself had excavated from the rock! The form and size of this sepulchre were exactly adapted to the melancholy purpose which we came thither to accomplish; and while we performed the funeral rites of our deceased companion, a feeling of superstitious awe seemed to pervade the whole company, as we stood around the tomb which appeared to have been miraculously provided for the occasion. We

covered the grave with moss and stones, securing it from the depredation of wild beasts; and this was the only monument we could afford to the memory of a man who had perished in the service of the cause of science, and who better deserves to be held in grateful remembrance than many whose epitaphs and dubious panegyrics are recorded on brass and marble.

CHAPTER XV.

ARRIVAL AT OPEN WATER.—EMBARKATION.—ADVENTURES AT SEA.—ARRIVAL AT HAKLUYT'S ISLAND.—GREAT SPORTSMANSHIP.—DREARY ASPECT OF THE COAST.—THE TRANSPORTATION OF ROCKS BY ICEBERGS.—SCARCITY OF PROVISIONS.—LARGE SUPPLIES OF DUCK EGGS.—WANT OF FUEL TO COOK THEM.

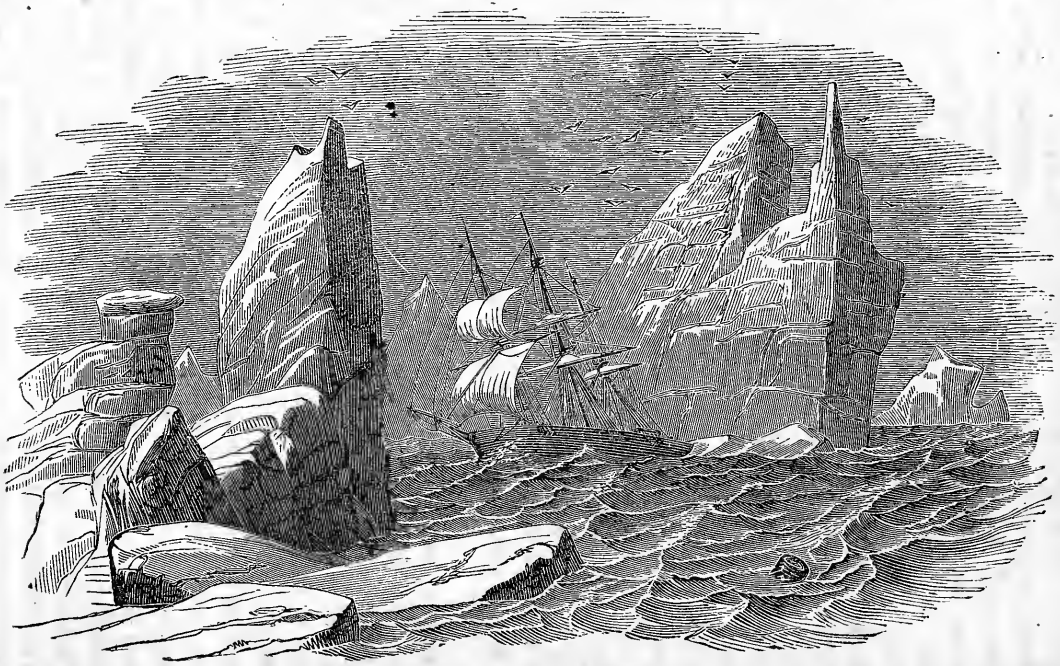
A FEW days after the sad accident recorded in the last chapter, we reached the edge of the open water, which, in that direction and at that time, was eighty miles from the ship; but, as we had been compelled to proceed in a circuitous course, we must have traveled over two two hundred miles of ice. But as soon as we arrived at the open sea a heavy gale from the southwest set in, which broke up the ice at the edges without floating it away; and, for several days, the boats were obliged to retreat, in order to find a secure position on the fast ice, as the breaking up at the edge was continued by the heavy swell from the southwest. The open sea, which now rolled before us in all its majesty, presented a grand spectacle, and a very agreeable one to us. The large, unincumbered expanse of water was bounded only by the horizon; no other limits were discoverable even from the tallest ice-hills. The dark color of this watery expanse was to us an object of curiosity, so strongly was it contrasted with the white surfaces of ice and snow to which we had been accustomed for two years. The change was a most grateful relief to the diseased eyes of some of our people, who had been almost deprived of the sense of sight by the dazzling brightness of the snow and ice.

Large icebergs were seen in rapid motion; the high, white-capped waves breaking on them and dashing the spray aloft, while the sunbeams, glancing through the misty showers, imparted to them all the richest and loveliest tints of the rainbow.

On the morning of the nineteenth day of June the gale had ceased, and the boats were lauuched from the icy embankment. A light breeze, which soon increased to a moderate gale, relieved the men from the labor of the oar. All were in good spirits, as no discouraging obstacles were now opposed to our progress. Within the first day after we had betaken ourselves to the boats we proceeded almost as far on

our homeward course as we had done in the preceding month; and this we did with scarcely any exertion at all, whereas our month's journey over the ice was a labor worthy of Alcides himself. In the afternoon, after a run of about fifty miles, we were brought up by a collection of ice, which, being broken up in small pieces, was a complete obstruction (though a temporary one) to our passage. All hands then turned in and took a comfortable nap of eight or ten hours, leaving but one of our party to keep watch. On the next morning the ice had opened sufficiently to give us a clear track. When we had proceeded, with all sails set, a little more than fifteen miles, and were but a short distance from a small island called Hakluyt, a gale from the south sprung up, and soon became so violent that we deemed it prudent to steer for the land. After immense labor (having to work against a head wind) and no little danger, we reached the island, in struggling to gain which we had consumed several hours. One of our boats was nearly filled with water, and all of them had sustained damages which made repairs necessary. On this island we were compelled to remain two days, before the ice and wind permitted us to proceed on our voyage.

The coast which had been in sight to the eastward during a great part of our trip, is one of the most desolate that imagination ever portrayed. Mountains, from one thousand to two thousand feet in height, rise from the sea and extend almost without intervals along the whole coast. These mountains are covered with snow, where the sides are not too precipitous to retain it. The precipices show the dark naked rock, unrelieved by a single tree, bush, or any sign of vegetation. The few valleys which appear between these mountains are occupied by those rivers of ice called glaciers which emerge from the great ice basin, which covers all the interior and extends to the sea, squeezing through every passage, and heaping up those immense mountains of floating ice with which these waters abound. In no part of the world is the aspect of nature so repulsive. Nothing is visible but ice, water, and rock. In the midst of these ice streams, which often present, at the point of junction with the sea, a face of more than ten miles in breadth, sometimes are seen dark rocky peaks of great height and completely surrounded by ice. The semifluid rivers of ice being divided into two branches by these peaks, are reunited after they have passed by the obstruction, but a black line extends from the point of reunion to the sea. This black line consists of the stones and rubbish which the glacier carries away from the sides of the peak, and afterward inserts them in the icebergs formed on the coast. By these again they are



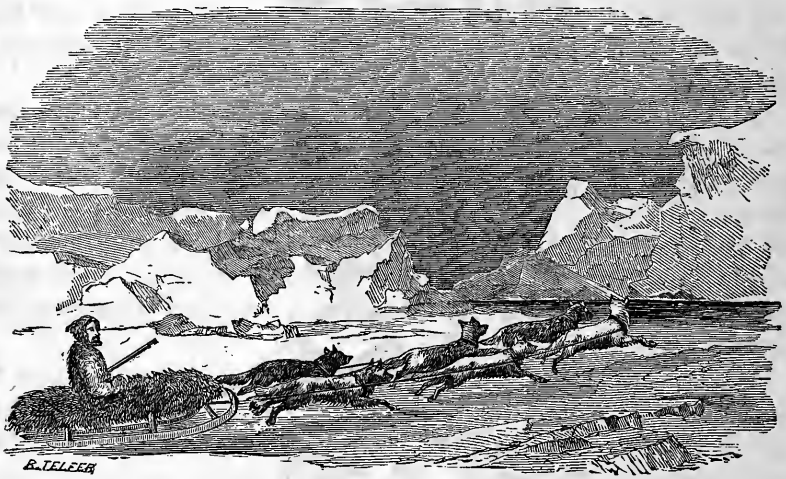
ENTRANCE TO SUKERTOPPER.

conveyed over seas to remote shores, where they are deposited on the bottom when the icebergs melt. Some of these stones or boulders are as large as medium-sized houses. It sometimes happens that they are deposited by icebergs on planes or platforms of rock of a very different kind, situated at the bottom of the sea, thousands of miles from the place of their origin. Here they remain isolated, and when the land rises, as it now does in Sweden, Norway, and the west coast of South America, the boulders are brought to light and attract attention by their singularity, as no similar rocks perhaps are to be found within a compass of several hundred miles. Such phenomena, not very long ago, caused much embarrassment among geologists, who were unable to explain how these masses of stone were transported to such great distances from the sites of their original location.

It is a curious speculation, but not a very improbable one, to suppose that those large masses of stone, evidently of foreign origin, which are now found on the plains of northern Germany, and in other parts of Europe; and which, more than a thousand years ago, supplied altars for Druidical sacrifice, were transported by erratic icebergs at some very remote time, from the mountains of the Polar regions. These transportations are certainly among the most wonderful operations of nature.

After we left Hakluyt Island, (our first resting place subsequent to our embarkation,) our progress was less rapid than it was on the first day of our voyage in the boats. Immense quantities of drifting ice often interrupted our passage; and, on several occasions, we were compelled to lay by for several days at a time. At the commencement of our trip we shot a great number of birds called little auks, which in our straitened circumstances were considered as tolerably palatable food. These birds migrate, every spring, from the latitude of Labrador to the regions of the high north, where they perform their incubation, returning with their brood in September. Their nests are placed on the slopes of the hills and artfully concealed under stones, so that it is almost impossible to find them. These fowls are very numerous; the flocks of them being even larger than those of the wild pigeons, which visit some parts of the United States. The mountains and seas are often covered for many miles with the auks; millions of them at a time must have been in sight from our boats. They were so densely crowded together that the most unskillful or unlucky gunner could not fail to make a good shot. This was rare sport for those who liked it. Scarcely troubling ourselves to take aim, we blazed away, and very often twenty or thirty auks were killed by each discharge of the gun. The quantity

of these birds consumed by our party was enormous. Each of us ate from three to six at a meal, and all of the men who could be spared from the service of the boats were almost constantly employed in preparing them for the kettle. Lest this account should cause us to be suspected of ogre-like voracity, let me remark that the auk is not larger than a snipe, and that we had nothing to eat with them—no vegetables, and very often no bread. Besides, the Arctic breezes, as I have mentioned in another place, have a surprising effect in sharpening the appetite.



ARCTIC DOG SLEDGE—FULL GALLOP.

But this abundant supply of birds was of short continuance. As we increased our distance from the shore the auks became scarcer, and very soon we saw no more of them. Had it not been for this fortunate supply of birds, it is probable that our stock of provisions would have been exhausted before we could have reached any place where fresh supplies might be obtained. As it was, we were compelled to content ourselves with very short rations, consisting of two ounces of bread and a spoonful of lard for each meal. Such small allowance of provisions did not agree very well with the large amount of work which our men were required to perform. The consequence was that many of them became sick, and all of them were too weak to execute their tasks in a very efficient manner.

About the middle of July we reached another little island called Dallrymple Rock, where we procured a good supply of fresh provisions.

CROSSING THE CHANNEL.

This island is a great place of resort for eider ducks, and here we found their eggs in great abundance. During the two or three days of our abode on this island, where we were detained by the closely packed ice and the want of favorable winds—several thousands of these duck eggs were collected from this small rocky island, which is little more than a mile in circumference. These eggs are nearly twice as large as hen's eggs, the shells are of a greenish color, and the taste of the enclosed aliment is very much like that of the common duck eggs, rather stronger perhaps; but as our stomachs were strong likewise, they were not daunted by the flavor of the eggs. The nests of these ducks are of a circular form, and are composed entirely of eider-down, which the bird plucks from her own breast for the purpose of forming her "procreant cradle." The stock of eggs which we laid in at this place furnished us with provisions for several days, but afforded very little variety in the way of eating. We breakfasted, dined, and supped on eggs, and on eggs only, except a small allowance of bread at each meal. However, we had a *sufficiency* of eggs, and that to people in our situation was a blessing for which we felt bound to be grateful.

But another difficulty now occurred to us. Our fuel had become very scarce, and we apprehended that we should soon be unable to get our eggs cooked. Before we left the United States we laid in a large stock of pork fat, intended for lamp fuel and other combustible purposes; but this article had now become extremely scarce. It was resolved, therefore, in solemn conclave, that the lard fuel should be reserved for the purpose of boiling our tea, and that the eggs should thenceforth be eaten raw; which resolution was carried into effect, much to the discomfort of some of our party.

CHAPTER XVI.

WE ARRIVE AT A SPOT WELL POPULATED BY FEATHERED BIPEDS.—GREAT SLAUGHTER OF THE INHABITANTS.—WE EXPECT TO MEET WITH WHALERS, BUT ARE DISAPPOINTED.—VEXATIOUS DECEPTIONS PRACTICED ON US BY THE ICEBERGS.—ARRIVAL AT MELVILLE BAY.—DIFFICULTIES OF NAVIGATION AT THAT POINT.—THREE WHITE MEN ARE DISCOVERED ON AN ISLAND.—ARRIVAL AT A DANISH SETTLEMENT THE END OF THE FAMOUS BOAT JOURNEY.

JUST at the time when all our eggs were used up, our progress was effectually stopped by large floes of ice which adhered to the shore, and were too thin to admit of the transportation of our boats over them on sledge-runners as formerly. All that we could do, therefore, was to wait patiently until, by the action of the wind and waves, this obstruction should be broken up or removed. We landed on the coast, where we were detained for three weeks; but fortunately the place afforded us an ample supply of food. This locality was a "rookery" of loons, situated among some cliffs, which rise from one thousand to fifteen hundred feet perpendicularly from the sea. The loon is a marine bird which migrates, like the little auk, to high northern latitudes, in the summer season, for the purpose of depositing its eggs and hatching them. The rocky precipices were covered with these animals. On every little projecting shelf of the rock the birds were seen in close ranks, sitting on their eggs. Very often fifty or more of them were ranged in one straight line with their breasts toward the sea. They do not build any nests, but hold their eggs on their feet, and so perform the operation of hatching them. They execute this maternal office with admirable patience. The water from the melting snow often runs from the rocks above directly under them; but they seem to disregard this inconvenience. The noise made by the vast congregation of birds which frequent these rocks is almost stunning, exceeding the roar of Niagara; millions of the feathered performers being engaged in the grand concert. Their melody, however, is not of the most fascinating kind. To say the truth we did not like their music, and therefore we felt no compunction or remorse when we fired among the vocalists, and silenced some of them most effectually. When a gun is discharged into the rookery, so many birds fly up that the sky seems to be filled with

them, considerably thicker than "the leaves which strew the autumnal floods in Valambrosa," and the horizon, for a time, is scarcely visible. But the vast numbers which rise on their wings make no perceptible diminution of the less timid crowds which remain on the rocks. From two to five, and sometimes more, are killed at every shot; and such is the thronged condition of the birds, that it makes little difference whether you take aim or not. As the startled flocks rise up at the report of the gun, immense quantities of eggs are thrown into the sea; nor is this the only waste, for at least a half of the birds which are shot fall on the shelves of the rock where they were sitting, and remain there, far beyond the reach of the gunner. A sufficient number however fell down on the ice or water at the foot of the cliffs, and these were reserved for the uses of our culinary department.

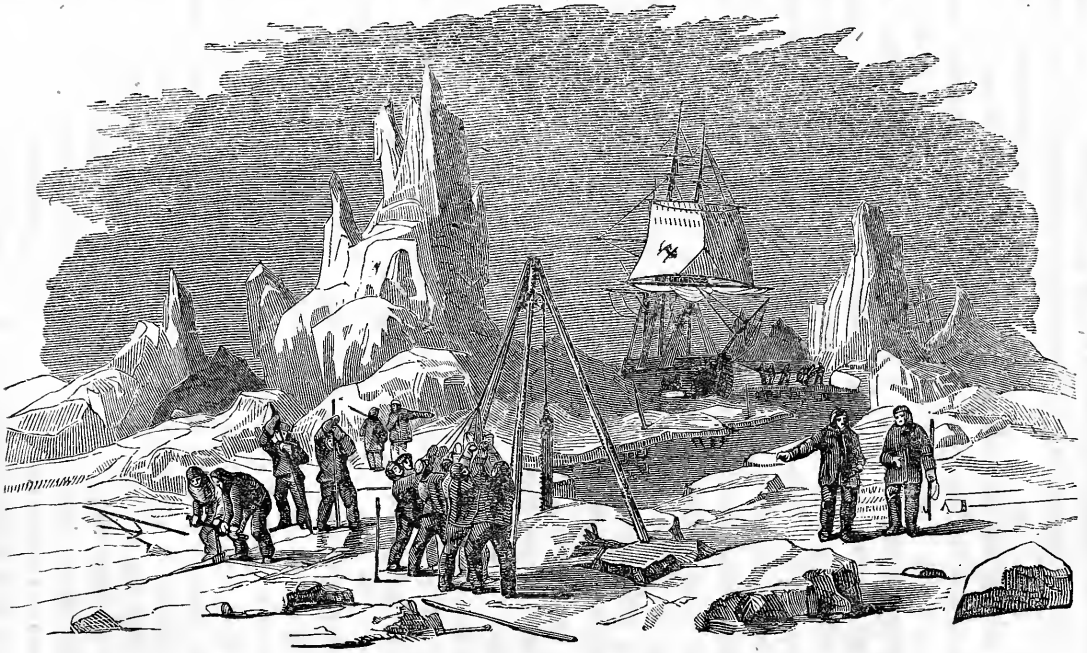
The average weight of a loon is about two pounds. The legs, wings, and bill of this bird, like those of the little auk, are black. The breast is white. Two of them are often seen fighting on the surface of the water, and they are so intent on their belligerent operations that nothing else can attract their notice until the duel is ended. While these fights were going on, a man in a boat often approached the scene of battle, and took possession of one or both of the combatants with perfect ease; their warlike ardor not allowing them to perceive the advance of their common enemy. While we were waiting under these cliffs for the breaking up of the ice, we feasted luxuriously on loons and their eggs—and likewise put up for future use several bags full of the birds, which were cleaned and dried for the purpose.

In the meanwhile, a watch was kept for whaling vessels, as we were now in the track which is frequented by ships engaged in that service. Several times we were all excited by the report that a ship was in sight, but in all cases this proved to be a mistake. The object which our man on the lookout mistook for a ship, invariably proved to be an iceberg; and the mistake was excusable, for the bergs are very deceptive when seen at a distance, assuming all imaginable forms, and old sailors are often deceived by their close resemblance to ships in full sail. The delusion is sometimes most wonderful; the spectator sees, or imagines he sees the mast, sails and rigging all traced out with the greatest precision, the dark lines which help to make out the picture being nothing more than the stones, earth, and rubbish which are incorporated with the ice. I have often been startled by the appearance of magnificent buildings rising from the sea; and not until I had been repeatedly taught by experience that the appearance was fallacious, could I be persuaded that the splendid object before me was merely an iceberg.

After many such excitements and disappointments, the ice opened sufficiently to let the boats pass. We then worked our way slowly along the coast, passing another community of little auks and observing a constant succession of dreary mountainous scenery such as I have described in the preceding chapter. The position of the ice was always changing with the changes of the tides, closing in toward the shore when the tide set in that direction and opening again when the tide set outward. We were obliged therefore to be always on the alert, laying by and sheltering ourselves in the cover when the ice pressed in toward the shore, and proceeding onward as expeditiously as possible when the track was reopened. Warping along in this way made severe labor for the men, who were kept actively employed so long as the passage remained unobstructed, which was sometimes from twelve to fifteen hours. The time allowed them for repose was seldom more than five or six hours *per diem*.

By the nineteenth day of June we reached Cape York, at the entrance of Melville Bay. This bay is an indentation on the coast of Greenland of sixty miles in depth. It lies south and east of Cape York and to the north of a point called the Devil's Thumb. From this point to Cape York the water is generally covered with immense fields of ice, called by navigators the "land-ice," or "fast-ice of Melville Bay," along the edges of which the whalers work their way to the north. Outside of this vast ice-cake are moving fields of ice composed of slabs or pieces of all sizes, which are broken up by the motion of the water and their collision with each other. This last-mentioned ice is called by sailors "the middle pack," it is in constant motion, being driven about by the winds and currents. This collection of ice is formed by the discharges from the several channels of Lancaster, Jones', Smith's, and Whale Sounds, which discharges are accumulated at this point by the currents flowing in various directions. On the west coast of Greenland or east side of Baffin's Bay, a current sets in and runs northward until it approaches Cape York, when it turns to the west. When it reaches Lancaster Sound it unites with a current proceeding from that channel, and both together run southward along the western side of Baffin's Bay or the east coast of North America.

There is a large expanse of slack-water between the current running northward on the east side of the Bay, and that which runs southward on the west side. In this slack-water the ice carried out by these currents is accumulated, and forms those large tracts of movable ice called the Middle Pack. By southerly and westerly winds this pack is driven toward the fast-ice, and then the passage through Melville



CUTTING INTO WINTER QUARTERS, MELVILLE BAY.

Bay is shut up. But it is opened again by winds from the north and east, and then there is an unobstructed track for ships between the fast-ice and the "pack." Often when the wind changes, and from other causes, the pack ice is driven in suddenly and unexpectedly, and then the ships which happen to be in the passage are in a very dangerous situation, as we have explained in a former part of this narrative.

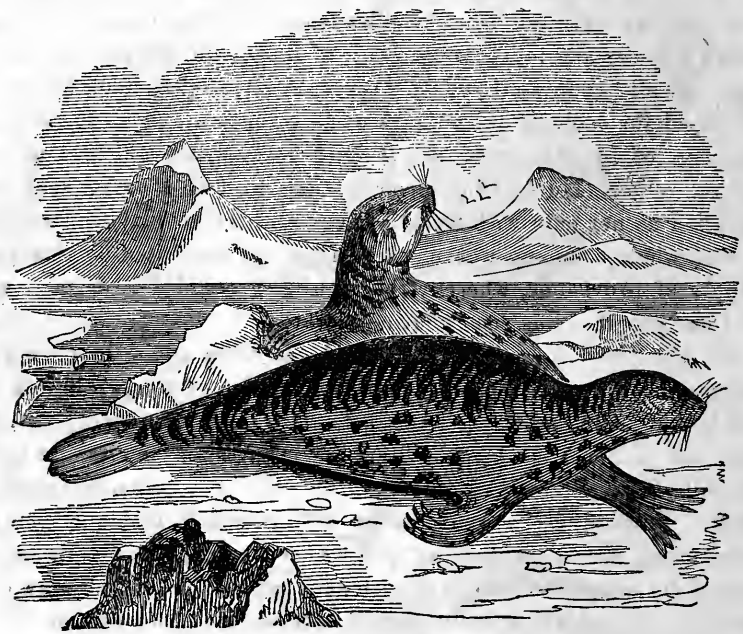
For the most part of the time our little fleet of boats was favored with fair winds and a free passage through these accumulations of ice. Only on a few occasions were we obliged to resort to our sledge runners to transport the boats over ice cakes which shut up our passage. At one time we were full seventy miles from the nearest land. We again found it necessary to economize our provisions in this part of our voyage, and all hands were put on the very short allowance of two ounces of bread for each individual, at a meal. In this exigency, the marksmanship of Mr. Petersen, the Danish interpreter, afforded us unexpected relief. He had the good fortune to kill a large seal, which supplied us not only with meat, but also with fat or blubber for fuel.

The whole company was much revived and inspirited by this timely supply of provisions, whereby the men were enabled to do more work, and our progress was somewhat accelerated.

On the third day of August the boats were again in open water, moving onward quite briskly under the impulse of a fresh breeze from the north. Our squadron now consisted only of two boats; the third one, the *Little Dingy*, was cut up for firewood soon after we entered Melville Bay. She was smaller than the other two boats, and much less swift. Finding therefore that she only retarded our movements, we condemned her to the flames; and we were rather glad to have a fair excuse for supplying ourselves with such capital fuel. The crew of the condemned boat was equally divided between the other two, so each of our remaining boats had eight men.

The fourth of August was a memorable day. In the afternoon of that day we saw the first white men which, with the exception of our own party, we had seen for more than two years. The sight of these persons was almost as grateful to us as if they had been our own kindred. The manner of our meeting with them was as follows. While we were sailing among some small islands, human voices were heard, and soon, through the spy-glass, we discovered a tent on one of the islands; shortly after we observed the masts of a large boat; and then three men were discovered on the side of a hill. So eager were we to exchange greetings with them, that all hands betook themselves to the oars, and the boats were made to shoot with arrow-like swiftness to the

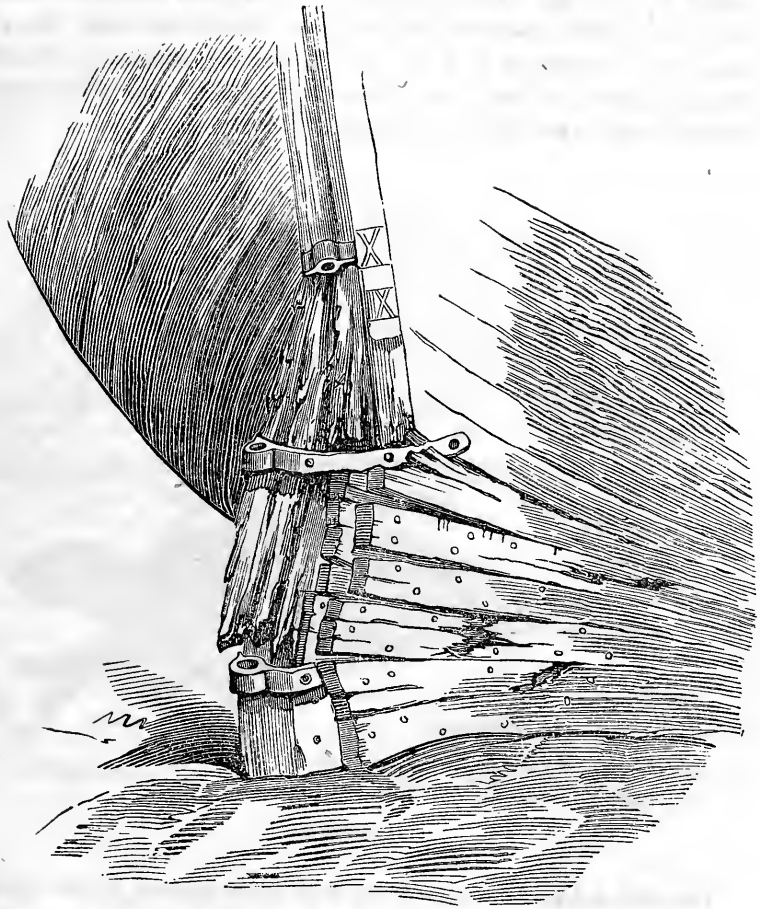
shore. The strangers proved to be three Danes, who had come thither in a very large boat to procure oil and blubber from the Esquimaux, whose summer habitations are scattered about on these islands. Our new acquaintances were from the northernmost Danish settlement, called Upernavik. They behaved in the most hospitable manner, offering us three luxuries which we had almost forgotten, viz., coffee, beer, and tobacco, all of which were thankfully accepted. According to the estimate of these Danes we were sixteen Danish miles, equal to seventy-five statute miles from Upervavik.



SEALS.

We made a halt for several hours with these persons, partaking of the refreshments which they freely offered us, after which we re-embarked and steered directly for the settlement, which we reached on the eighth of August, having been much incommoded on the last days of our voyage by the densest fog that ever came under my observation.

Our arrival made a tremendous sensation among the people of the settlement, who all assembled on the beach to receive us, and wonder at our outlandish and almost unearthly appearance. Mr. Petersen, our interpreter, was a resident of this place, and his wife and children were among those who thronged the beach to give us a welcome. The meet-



OUR RUDDER-POST, AFTER A SEVERE "NIP."

ing of Mr. Petersen and his relations, some of whom probably never expected to see him again, was joyful to themselves and affecting to the spectators. The joy of his wife was the more excessive, because she had been impressed with the belief that he would never return, the dangers of Arctic travel being much magnified by her affectionate solicitude. Our boats were hauled up on shore, and our people slept in them that night for the last time.

CHAPTER XVII.

OUR COOL RECEPTION AT UPERNAVIK.—THE ESQUIMAUX TREAT US HANDSOMELY.—THE CURIOUS RELIGIOUS NOTIONS OF THESE PEOPLE.—THEIR GOVERNMENT.—THEIR STRANGE DUELS.—IMPROVEMENTS IN THEIR MODES OF LIVING.

THE governor of the settlement, Mr. Fleischer, was absent, and, without his permission nothing could be given out of the public stores. We were compelled, therefore, to live for several days on the provisions which we had brought with us from the north, hoping that we should fare better when the governor had returned. We were quartered in a loft over a storehouse, and our mode of living was not much more stylish and comfortable than it had been for the preceding three months in the boats. The Esquimaux inhabitants and the priest, Mr. Kragh, showed us much kindness. Observing that the loft in which we lodged was too cool to be agreeable, they invited us to their tents, giving us permission to sleep on the floors, but they were unable to afford us any bedding; we were constrained, therefore, to use that which we had brought with us from the ship. We remained here about three weeks, waiting for the Danish vessel which makes an annual visit to the settlement. On the arrival of this vessel a passage for the whole company was engaged. The vessel was a brig called the *Mariana*, of about two hundred tons burden. On her departure she was freighted with seal skins and oil; and as the cabin was merely large enough to accommodate three persons, it was appropriated to Dr. Kane and two of his officers. The others were lodged a-midships, among the oil casks, but the captain endeavored to make the whole party as comfortable as possible.

The Esquimaux inhabitants of the Upernavik settlement appeared to be sorry to part with us. In justice to them I must say that they had treated us much better than the other settlers did, though the latter pretend to more civilization. As I became more intimately acquainted with these singular people, I felt disposed to like them better. Of all savages, so called, they are, perhaps, the most amiable—especially those of them who have been least in correspondence or contact with civilized nations. While we remained at this settlement I applied myself to

the study of the Esquimaux character; and being under the necessity, like my comrades, of passing much of my time in the Esquimaux huts, I had very good opportunities for learning various particulars concerning their customs, religious impressions, &c., which, not being comprised in my former accounts of these tribes, may be here introduced, with the hope that they will be as interesting to my readers as they were to myself.

All the Esquimaux tribes depend on the sea, or the productions thereof, for their subsistence: their places of residence, therefore, are always near the coasts or on small islands. Their dwellings are sparsely distributed over a large space; thus the tribe which inhabits the shores at the head of Baffin's Bay occupies a coast line extending more than three hundred and fifty miles, yet there are not more than twenty huts, arranged in clusters of from three to five, within that extent of ground, and the population is probably less than two hundred persons, including men, women, and children. Their life is subject to many vicissitudes, perpetually alternating between a feast and a famine. They are never moderate in prosperity, but always patient in adversity. No prospect of want can make them economical. When they have food, they use it freely, and indeed extravagantly; and when they have little or nothing to eat, they submit to their privations with admirable fortitude and resignation.

They subsist for the most part on animal food; viz., the flesh of the bear, walrus, seal, and fox, and occasionally certain aquatic birds; but when pressed by hunger, they devour the few edible herbs and roots which their sterile country affords, and especially the lichen, or moss, which is found on some of the rocks; and it sometimes happens that they are obliged to maintain themselves for months together on this "lenten entertainment."

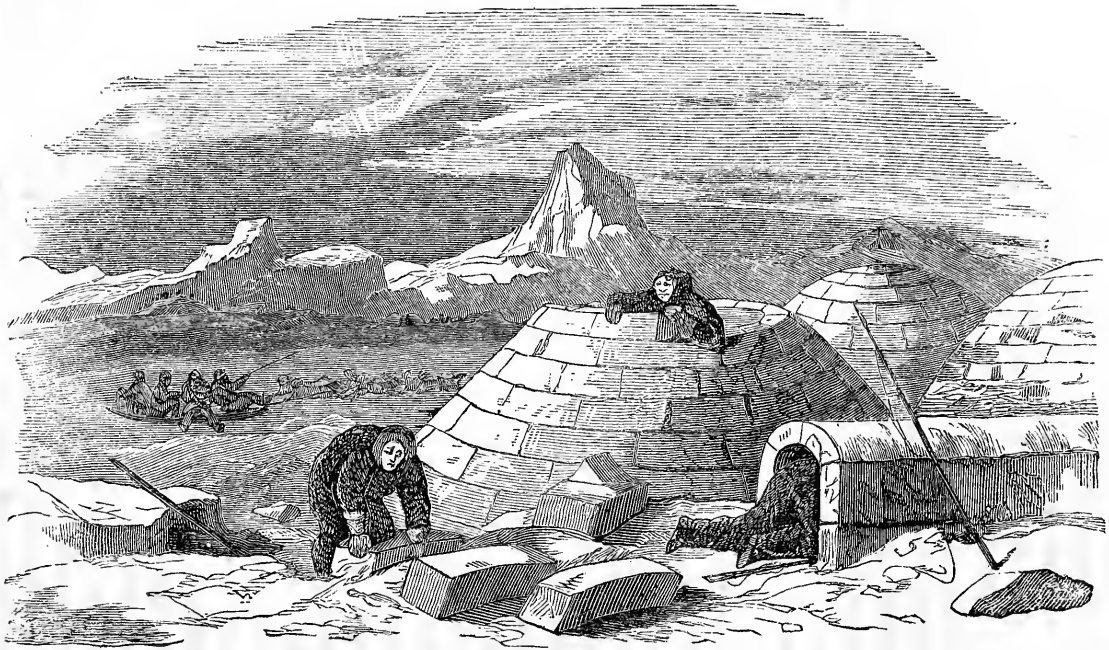
The religion of the Esquimaux is, of all curious systems of theology, the most curious. Nevertheless they are not polytheists, demon-worshipers, nor even idolaters, in the common acceptation of that term. They believe in one supreme deity, whom they call Toongarsoon; likewise in a devil, who is of the feminine gender, but whose proper name (if she has one), I could never ascertain. Their god is supposed to reside in a handsome stone dwelling, situated somewhere in the sea. His occupation, according to their notion, is a very benevolent one: for he is said to keep large herds of seals, sea-horses, &c., for the express purpose of providing entertainments for the souls of good men, which are transported immediately after death to the apartment assigned to them in the marine palace where his godship resides. A large apart-

ment of this palace is said to be fitted up with cooking apparatus, all on the most extensive scale; pots and kettles of such huge dimensions, that walruses, sea-unicorns, seals, &c., in large numbers, are boiled or baked therein every day, to furnish a perpetual banquet for the happy spirits of deceased Esquimaux hunters, or such of them as have behaved themselves with tolerable propriety while in the flesh. Hence it will appear that the Esquimaux heaven consists of a never-ending feast of fat things, an eternity of well-cooked walrus-meat and seal's blubber.

The devil (the female one, remember), is supposed to be an unworthy sister of the divine Toongarson. She resides at some distance from her brother's palace, on an island, where game of all kinds is very scarce, where she takes charge of deceased sinners, who, under her domestic management, fare worse, if possible, than the inmates of some of the cheap boarding-houses in New York. In fact, these delinquent spirits suffer the pangs of starvation, and their cries and shrieks of agony are often heard above the howling of the Arctic gales and the angry roar of the mountain torrents.

The Esquimaux are almost the only people in the world who have no government. Every man among them is absolutely his own master. They have indeed a nominal patriarch or chief-officer of the tribe, who is called Noolegook; but his office is a sinecure, and his prerogative is not to enforce obedience but to give advice. His advice is given freely and seldom gives offense, for the Esquimaux have not learned that it is an insult to offer a man good counsel; however, they often adopt the rule which is operative on a majority of our species, that is, to accept no advice which does not accord with their own opinions.

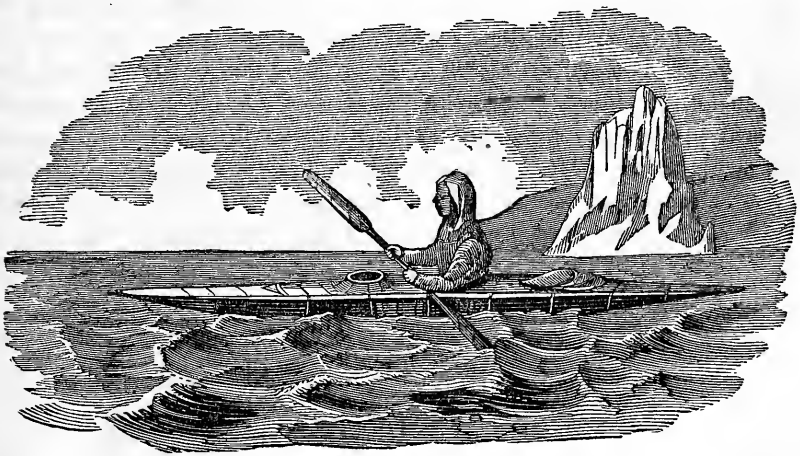
They acknowledge no law except public opinion, and this seems to have great weight with them. Crimes are seldom committed because they are disgraceful and inconvenient, the criminal being shunned and abhorred by his fellow-countrymen. Injuries are sometimes but not always punished by acts of private resentment; but the principal way in which their vengeance is exhibited is by making their enemy ridiculous. For this purpose he is invited by the offended party to meet at a certain time and place where the matter in dispute becomes the subject of a satirical controversy, a number of persons being assembled to hear and decide according to the real merits of the case. The accuser then makes a speech full of biting sarcasm, in which the conduct of the accused is represented in the most unfavorable light; and when this harangue is finished, the opposite party rises and makes another speech, intended to throw back all the odium and contempt on his opponent. In this way the discussion is continued until an overwhelming laugh is



BUILDING SNOW HUTS.

raised at the expense of one of the controversialists, who makes a hasty retreat, pursued by the scoffs and jeers of the whole auditory, while his opponent, triumphantly claims the victory. All disputes and quarrels among these people are settled by this whimsical mode of duelling; and the wordy contest being over, the opposing parties are generally reconciled and as good friends as ever.

By the arrival of the annual ships at Upernavik, the Esquimaux residents were supplied with various articles of food which they covet exceedingly, particularly coffee, which they consume in great quantities when they have become accustomed to its use. It is fortunate for them that they have not the same passionate fondness for alcoholic liquor; but, as I have said before, they have no relish for any thing of the kind. As soon as the lading of the ship was deposited in the storehouse, the Esquimaux customers thronged to the place with the commodities for which they receive European productions in exchange. Soon after a fire was kindled before every tent, and scores of Esquimaux women were employed in the preparation of coffee. They make it very strong, and drink it without milk or cream of course, as these articles are not within their reach; but for the purpose of sweetening the beverage, they hold small pieces of sugar candy in their mouths as the Netherland ladies do



ESQUIMAUX AND HIS KYAIK.

when they drink tea. While their store of coffee lasts, they drink the liquid preparation ten or twelve times per day.

The Esquimaux of this settlement do not live in stone houses like

those on the northern coast; their dwellings are made of sods or turf, and have wooden roofs and sleeping bunks of the same material; though the interior of the huts are arranged, in other respects, much like those of the northern tribes. At this settlement it is no uncommon thing for marriages to take place between Danish men and Esquimaux women; the consequence is that a mixed breed is produced, which is superior in some particulars to the original stock on either side. The women of the mixed races are much handsomer than those of pure Esquimaux blood, the latter being scarcely distinguishable from the men except by their dress. The Esquimaux of this locality have begun to learn some of the arts and to appreciate some of the comforts of civilized life. Their houses are kept very neat and clean; the sides or walls are sometimes papered or covered with pictures, chiefly of German or Danish production, representing southern landscapes, agricultural scenes, cities, soldiers and other objects, of which these people can have but a very faint conception, as they are so very unlike any thing that may be seen in their own desolate country. Some of the huts have, in addition to the common Esquimaux lamps, very convenient iron stoves, which are exported to this region by the Greenland Trading Company. These stoves, as a matter of policy, are sold to the natives at very low prices, because the use of them makes less consumption of oil, and the company obtain larger supplies of that commodity for exportation to Denmark, Sweden, and other European countries.

A priest and a schoolmaster are stationed at this settlement, and the Esquimaux children are taught to read and write in their own language, for which a suitable alphabet has been contrived. Like the tribes of the north, the Esquimaux of Upernavik change their places of residence twice in each year, occupying their huts in winter and tents in summer. Their tents are made of prepared seal skins stretched on poles.

CHAPTER XVIII.

DRESSES AND DECORATIONS OF ESQUIMAUX LADIES.—AN INGENIOUS SIGNAL, OR A BEAU-CATCHING CONTRIVANCE.—ADMIRABLE CONSTRUCTION OF THE ESQUIMAUX BOATS.—REINDEER HUNTING BY WATER.—WE PROCEED IN A DANISH SHIP TO DISCO ISLAND.—OUR HOSPITABLE RECEPTION.—ARRIVAL OF CAPTAIN HARTSTEIN'S EXPEDITION IN SEARCH OF DR. KANE.—WE EMBARK FOR THE UNITED STATES.—ARRIVAL AT NEW YORK.—CONCLUSION OF THE NARRATIVE.

THE women of this settlement aim at some elegance in their style of dressing. Their boots are made of tanned seal skin of various colors, white, red, yellow or violet, and profusely embroidered. They wear pantaloons of tanned seal skins, ornamented with colored strips of the same kind of leather. Their jackets or jumpers, are composed, sometimes, of printed cotton cloth or calico, and sometimes of woolen cloth embroidered with silk tape or colored galoons. Their garments exhibit as much variegation of color, if not as much richness of material, as the dresses of the ladies who promenade Chestnut street and Broadway. All of them wear an unsightly knot of hair on the tops of their heads, which counteracts all their efforts to look pretty. Around this top-knot the married ladies wind a narrow blue ribbon; the unmarried ones use a red ribbon for the same purpose; and this ornament answers the purpose of a sign or signal to advise male spectators that the wearer is still in the matrimonial market; and I dare say some of the young ladies of other countries would be glad to avail themselves of a similar mode of advertising. The head-dress is completed by tying a colored silk-handkerchief, neatly folded, around the brow, like the ancient tiara or diadem. These ladies are fond of *bijouterie;* few of them being seen without rings in their ears and on their fingers.

Near the tents are low stands or racks made of wood, on which the sledges and kaiacks are placed when they are not required for use. The kaiack, or Esquimaux boat, deserves a particular description. It consists of a light wooden frame, covered with tanned seal skins: the length is about eighteen feet; their greatest breadth on deck, is from eighteen to twenty-one inches, and their greatest depth about ten inches. The wooden strips of which the framework is composed, when

separate, are not thicker than a man's finger. The seal hides which cover this frame are sewed together with the tendons or sinews of the same animal. The deck is formed in a similar manner and of the same materials, but has a circular hole in the middle, through which the boatman squeezes his lower extremities, which are pretty well secured from wet and cold, while the other parts of his person are protected from the weather merely by his ordinary wearing apparel. The hole in which the boatman sits has around it a seal skin rim or belt about two inches wide, which the man ties around his waist, and so makes his little bark perfectly water-tight, above deck and below it, whereby he is enabled to float her in the roughest seas, as it is impossible for his boat to sink. On the deck immediately behind the boatman is an air-tight bag or bladder, made of seal skins, which is kept inflated, and is intended to be attached to the line of the harpoon, for the purpose of retarding the progress of the animals which the boatman may succeed in harpooning. Before the Esquimaux boatman a stand or reel made of bone is fixed to the deck, and on this the harpoon-line is coiled. The harpoons and lances are also carried on deck. The kaiacker, or boatman, is dressed in water-tight seal skin clothing. He propels his kaiack through the water by means of a paddle about one foot long, having a blade on each end. In these boats the Esquimaux can move at the rate of five miles or more per hour; and, on long journeys, they average from thirty to forty miles per day. When land or ice interrupts his progress, the boatman takes his kaiack out of the water, and carries it, with all its freight, on his shoulder or back. Besides their kaiacks, the Esquimaux have boats of a larger size called oomiaks. These are their family boats, and are used for the conveyance of the women and children. The oomiaks are made in all respects like the kaiaks, differing from the latter in size only; and are rowed or paddled by the women themselves, as the men seldom or never accompany them on their excursions.

The Esquimaux of Upernavik use their boats when they hunt the reindeer, as these animals sometimes betake themselves to the water when they are pursued, and continue therein until they are so much fatigued with swimming that they are easily overtaken. They are so numerous on the mainland that four or five thousand of them are killed in one season by the inhabitants of a single settlement.

After leaving Upernavik we had a quick passage, in the Danish ship, to Godhaven or Lively, on Disco Island, where the Royal Inspector of North Greenland resides. This place has quite a respectable appearance; it contains, besides many huts and small buildings, some eight

or ten handsome wooden houses of considerable size, built in the modern style; the sight of which made us feel almost at home. Among the residents of Godhaven, besides the Inspector, are the Governor, Mr. Sanderson, and his Assistant, Mr. Olrick, and several other gentlemen of education and refinement, who treated us with the greatest hospitality—doing all in their power to compensate us for the hardships and deprivation of comforts, to which we had so long been subjected. Certainly the kindness of their behavior to us will always be held in grateful remembrance by every member of our party.

A Danish ship visits this place once every year; and we were fortunate enough to find it there when we arrived. This ship is sent from Copenhagen for the purpose of supplying the settlers with clothing, provisions, newspapers and letters from their friends in Denmark. As the good people on the island receive their newspapers but once in a year, it may be supposed that they are not well posted up in the affairs of the world at large.

A short time before the Danish vessel intended to start on her homeward trip, two other ships were reported to be seen standing for the harbor. They were soon made out to be a propeller and a bark; and we doubted not that these were the vessels belonging to the American expedition under Captain Hartstein, which had been sent out to search for Dr. Kane and his party. We had heard some account of this expedition while we remained at Upernavik. As soon as the vessels came near enough to satisfy us respecting their identity, several boats were manned for the conveyance of our company on board. When we reached the bark, which was towed by the steamer, we met with a hearty and joyful reception from Captain Hartstein and the officers under his command. They had past our boats in Melville Bay while we were returning and Captain Hartstein was proceeding northward, but it so happened that we did not come within sight of each other. They approached within forty miles of our deserted ship, when their progress was stopped by the fast ice. They then returned on the west side; and as no traces of our expedition were found, they intended to return to the north, and renew their search during the winter and the succeeding spring and summer. Their voyage had been quite a rough one, as the condition of their ships sufficiently testified. These vessels remained for several days in the harbor of Godhaven, where the officers were most generously entertained by the gentlemen of the place. All the members of Dr. Kane's expedition being received on board, we started for New York, and arrived at that city, after a very quick passage, on the eleventh day of October, 1855.

To many of the friends whom we had left in the United States when we engaged in this arduous enterprise, our safe return was equally gratifying and unexpected. Our protracted absence had confirmed many persons in the belief that we had perished in the realms of perpetual ice. Some did not even admit that we had sacrificed ourselves in a good cause, but judged that we had paid with our lives the just penalty of our presumption in attempting to search that dark corner of creation, where Nature shrouds herself in an impenetrable tabernacle of ice. To our own perceptions this happy restoration to our homes and friends was a fortunate event; for on more than one occasion during our absence we had almost ceased to hope for such a consummation. We had passed through scenes of severer suffering, perhaps, than any human beings ever endured before; we had lived through a succession of hardships which thousands and tens of thousands of our fellow-men could not have survived; we had been literally buried in the ice, and could deliver ourselves from that frightful inhumation only by attempting a journey which nothing but desperation could have prompted us to undertake. Need I say that our hearts glowed with emotions of gratitude to God when we found ourselves restored to the blessings of a temperate climate, social intercourse, and domestic comfort; blessings which, by long privation, we had learned to appreciate according to their worth.

THE END.

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